



STIC Search Report

EIC 1700

STIC Database Tracking Number: 146773

TO: Hoa V Le
Location: REM 9D61
Art Unit : 1752
March 11, 2005

Case Serial Number: 10/727833

From: Kathleen Fuller
Location: EIC 1700
REMSSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

There was only one reference for the elected species. I also did a structure search which was broad and covered most of the structures in the specification. 942 structures gave 477 CA references. There were many references-924 from the structures A1 and B1. However, when combined with utility there were only 23 CA references A1,B1 and the structure search.



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments: .

Drop off or send completed forms to EIC1700 REMSEN 4B28



SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: HOA VAN LE Examiner #: 60626 Date: 03 March 2005
 Art Unit: 1752 Phone Number: 301-571-272-1332 Serial Number: 10/727,833
 Mail Box and Bldg/Room Location: KEA 9DC1 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

(1) Please search for compounds of the general formula I, especially with the elected compound 1 on page 10 of the specification for use in a silver halide photographic art.

(2) Please search for compounds of the general formula A on page 14, line 12 of the specification, especially compound A1 on page 14, lines 19-20.

(3) Please search for compound of the general formula B on page 14, line 13 of the specification, especially compound B1 on page 14, lines 19-20.

STAFF USE ONLY

Searcher: K. Fuller
 Searcher Phone #: _____
 Searcher Location: _____
 Date Searcher Picked Up: _____
 Date Completed: 3/11
 Searcher Prep & Review Time: 40
 Clerical Prep Time: _____
 Online Time: 93

Type of Search

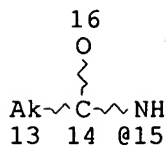
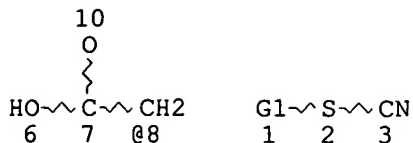
NA Sequence (#) _____
 AA Sequence (#) _____
 Structure (#) 12
 Bibliographic _____
 Litigation _____
 Fulltext _____
 Patent Family _____
 Other _____

Vendors and cost where applicable

STN ✓
 Dialog _____
 Questel/Orbit _____
 Dr.Link _____
 Lexis/Nexis _____
 Sequence Systems _____
 WWW/Internet _____
 Other (specify) _____

=> D QUE L19

L1 STR
G2~Cb
11 @12



Cb~Hy
4 @5

VAR G1=5/12
VAR G2=8/15
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS UNS AT 4
GGCAT IS UNS AT 5
GGCAT IS UNS AT 12
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1 N AT 5

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L2 942 SEA FILE=REGISTRY SSS FUL L1
L17 58 SEA FILE=REGISTRY ABB=ON C8H5N5S/MF
L18 1 SEA FILE=REGISTRY ABB=ON L2 AND L17
L19 1 SEA FILE=HCAPLUS ABB=ON L18

=> D ALL L19

L19 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1969:501811 HCAPLUS
DN 71:101811
ED Entered STN: 12 May 1984
TI Organic thiocyanate compounds. XLI. Thiocyanato-substituted
4(3H)-quinazolinones and tetrazoles
AU Pohloudek-Fabini, Roland; Kottke, K.; Friedrich, Friedmut
CS Sek. Pharm., Ernst-Moritz-Arndt-Univ., Greifswald, Fed. Rep. Ger.
SO Pharmazie (1969), 24(8), 433-8
CODEN: PHARAT; ISSN: 0031-7144
DT Journal
LA German
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
GI For diagram(s), see printed CA Issue.
AB RNCS (0.1 mole) was treated with 0.1 mole anthranilic acid in refluxing

*942 structures from
this query which
would cover many of
the structures on pages
10-11*

*selected species
only 1 CA
ref.*

EtOH for 1 hr. to give I. Treatment of I with NaCN and Br gave II. The following compds. were prepared (R, X, m.p. I, and m.p. II given): H, H, 320-3° (decomposition), -; Ph, H, 309-10° (decomposition), 149-52° (decomposition); 2-MeC₆H₄, H, 271-3°-133-5°; 3-MeC₆H₄, H, 296-7° (decomposition), 163-5° (decomposition); 4-MeC₆H₄, H, 309-10° (decomposition), 166-7° (decomposition); 2,4-Me₂C₆H₃, H, 279-80°, 165-7° (decomposition); 2-FC₆H₄, H, 280-1°, 117-19°; 4-ClC₆H₄, H, 320-3° (decomposition), 168-70° (decomposition); 2-BrC₆H₄, H, 266-8°, 133-5°; 3-BrC₆H₄, H, 306-7°, 175-7° (decomposition); 4-BrC₆H₄, H, 320-1° (decomposition), 177-80° (decomposition); 2-IC₆H₄, H, 280-3° (decomposition), 165-7° (decomposition); 3-IC₆H₄, H, 311-12°, 179-81° (decomposition); 4-IC₆H₄, H, 335-7° (decomposition), 174-5° (decomposition); 3-O₂NC₆H₄, H, 305-6° (decomposition), 187-9° (decomposition); Ph, Br, >340° (decomposition), 187-9° (decomposition); 4-Br-C₆H₄, Br, 330-5° (decomposition), 193-6° (decomposition); Ph, I, >330° (decomposition), 160° (decomposition); 1-naphthyl, H, 287-9° (decomposition), 201-3° (decomposition); 2-naphthyl, H, - (decomposition), 184-6°. RNCS was treated with NaN₃ to give III, which were converted to IV as above. The following compds. were prepared (R, % yield III, m.p. III, % yield IV, and m.p. given): Ph, 91, 152-3°, 78, 58-60%; 2-MeC₆H₄, 87, 129-31°, 70, 94-6°; 3-MeC₆H₄, 80, 155-6°, 83, 97-9°; 4-MeC₆H₄, 95, 158-9°, 77, 102-3°; 2,5-Me₂C₆H₃, 92, 145-6°, 94, 107-9°.

ST thiocyanatoquinazolinones prepn; quinazolinones thiocyanato; tetrazoles thiocyanato

IT 2,4(1H,3H)-Quinazolinedione, 3-(m-bromophenyl)-2-thio-
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT	16671-95-7P	22347-25-7P	22458-49-7P	22458-52-2P	23892-21-9P
	23892-22-0P	23892-23-1P	23892-24-2P	23892-25-3P	23892-26-4P
	23892-27-5P	23892-28-6P	23892-29-7P	23905-19-3P	
	23905-20-6P	23905-21-7P	23905-22-8P	23905-23-9P	23921-03-1P
	23921-04-2P	23921-05-3P	23921-57-5P	23921-58-6P	23921-59-7P
	23921-60-0P	23921-61-1P	23921-62-2P	23921-63-3P	23921-67-7P,
	2,4(1H,3H)-Quinazolinedione, 3-(o-bromophenyl)-2-thio-				24059-64-1P
	25663-76-7P	41401-38-1P			

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

=> D HITSTR L19



Structure

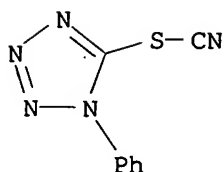
L19 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN

IT **23905-19-3P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 23905-19-3 HCAPLUS

CN Thiocyanic acid, 1-phenyl-1H-tetrazol-5-yl ester (6CI, 8CI) (CA INDEX NAME)



selected species

=> => D L47 BIB ABS IND HITSTR 1-23

*23 other references from
the structure search
& structures A1 & B1*

L47 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:995959 HCAPLUS
 DN 140:304137
 TI Synthesis of latex magenta couplers
 AU Xu, Xu; Huang, De-Yin
 CS Sch. Chem. Eng., East China Univ. Sci. Technol., Shanghai, 200237, Peop.
 Rep. China
 SO Youji Huaxue (2003), 23(12), 1375-1379
 CODEN: YCHHDX; ISSN: 0253-2786
 PB Kexue Chubanshe
 DT Journal
 LA Chinese
 AB 1-(2',4',6'-Trichlorophenyl)-3-amino-5-pyrazolone (3) was synthesized by the condensation of 2,4,6-trichlorophenyl-hydrazine with Et β -ethoxy- β -imino-propionate in the presence of sodium ethoxide. Three monomers of the couplers were obtained by the reaction of 3 or its 4-position derivs. with methacryloyl chloride. Three latex magenta couplers were formed by emulsion copolymn. of these monomers and Bu acrylate. The reaction intermediates and the monomers were characterized by IR and ¹H NMR spectra. Some factors of affecting the reactions mentioned above were discussed.
 CC 35-4 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): **41**
 ST butyl methacrylate dye monomer copolymn latex magenta coupler prepn
 IT Dyes
 Latex
 Magenta couplers
 (in preparation of polymerizable dyes and corresponding copolymer latex magenta couplers)
 IT Monomers
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (in preparation of polymerizable dyes and corresponding copolymer latex magenta couplers)
 IT 540-72-7, Sodium thiocyanate 920-46-7, Methacryloyl chloride
 5329-12-4, 2,4,6-Trichlorophenyl-hydrazine 27317-59-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of polymerizable dyes and corresponding copolymer latex magenta couplers)
 IT 27241-31-2P 52472-98-7P 85141-35-1P 676437-82-4P
676437-83-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (in preparation of polymerizable dyes and corresponding copolymer latex magenta couplers)
 IT 7382-23-2P 676437-78-8P **676437-80-2P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(monomer; in preparation of polymerizable dyes and corresponding copolymer
latex magenta couplers)

IT 85557-63-7P 676437-79-9P **676437-81-3P**

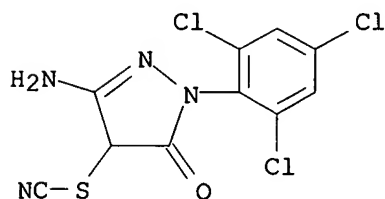
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of polymerizable dyes and corresponding copolymer latex magenta
couplers)

IT **676437-83-5P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(in preparation of polymerizable dyes and corresponding copolymer latex
magenta couplers)

RN 676437-83-5 HCAPLUS

CN Thiocyanic acid, 3-amino-4,5-dihydro-5-oxo-1-(2,4,6-trichlorophenyl)-1H-
pyrazol-4-yl ester (9CI) (CA INDEX NAME)

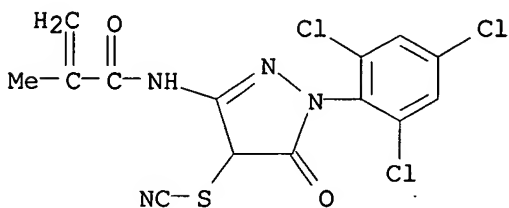


IT **676437-80-2P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(monomer; in preparation of polymerizable dyes and corresponding copolymer
latex magenta couplers)

RN 676437-80-2 HCAPLUS

CN Thiocyanic acid, 4,5-dihydro-3-[(2-methyl-1-oxo-2-propenyl)amino]-5-oxo-1-
(2,4,6-trichlorophenyl)-1H-pyrazol-4-yl ester (9CI) (CA INDEX NAME)



IT **676437-81-3P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of polymerizable dyes and corresponding copolymer latex magenta
couplers)

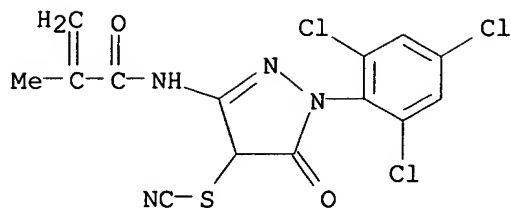
RN 676437-81-3 HCAPLUS

CN 2-Propenoic acid, butyl ester, polymer with 4,5-dihydro-3-[(2-methyl-1-oxo-
2-propenyl)amino]-5-oxo-1-(2,4,6-trichlorophenyl)-1H-pyrazol-4-yl
thiocyanate (9CI) (CA INDEX NAME)

CM 1

CRN 676437-80-2

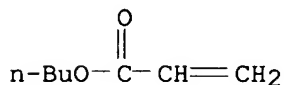
CMF C14 H9 Cl3 N4 O2 S



CM 2

CRN 141-32-2

CMF C7 H12 O2



L47 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:31525 HCAPLUS

DN 132:71325

TI Color **photographic** silver halide material with improved granularity

IN Bell, Peter; Borst, Hans-Ulrich; Buescher, Ralf; Endres, Lothar; Odenwaelder, Heinrich; Rosenhahn, Lothar; Simon, Lydia; Schumann, Hans-Joachim; Siegel, Joerg; Stetzer, Thomas; Teitscheid, Heinz

PA Agfa-Gevaert A.-G., Germany

SO Ger. Offen., 20 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19830439	A1	20000113	DE 1998-19830439	19980708
PRAI	DE 1998-19830439		19980708		

AB In the title color **photog.** Ag halide material comprising a support, at least 1 light-sensitive Ag halide emulsion layer and optionally at least 1 light-insensitive layer adjacent to the light-sensitive layer, the light-sensitive layer contains a light-sensitive Ag halide emulsion and at least 1 thiocyanate-releasing compound. The above material is the color neg. **photog.** film with improved granularity.

IC ICM G03C007-30

ICS C07C331-02

CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)ST color **photog** silver halide material thiocyanate releasing compdIT **Photographic** films(color, neg.; color **photog.** silver halide material with improved granularity)IT 253186-70-8 **253186-71-9**

RL: DEV (Device component use); USES (Uses)

(thiocyanate-releasing compound in color neg. **photog.** film with improved granularity)

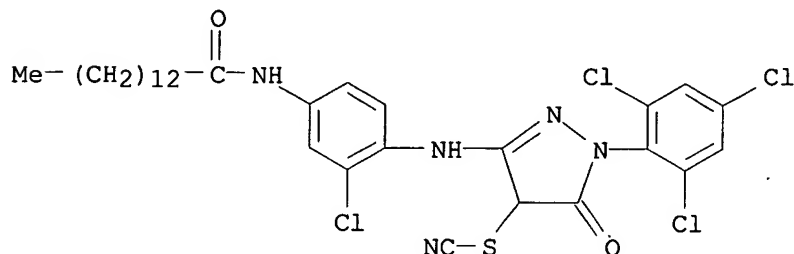
IT 253186-71-9

RL: DEV (Device component use); USES (Uses)

(thiocyanate-releasing compound in color neg. **photog.** film with improved granularity)

RN 253186-71-9 HCAPLUS

CN Thiocyanic acid, 3-[[2-chloro-4-[(1-oxotetradecyl)amino]phenyl]amino]-4,5-dihydro-5-oxo-1-(2,4,6-trichlorophenyl)-1H-pyrazol-4-yl ester (9CI) (CA INDEX NAME)



L47 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:342604 HCAPLUS

DN 131:11499

TI **Silver** halide color **photographic** element containing **dithiolone-1-oxide** compound in **emulsion**

IN Lok, Roger

PA Eastman Kodak Co., USA

SO Jpn. Kokai Tokkyo Koho, 14 pp.

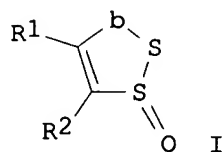
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11143012	A2	19990528	JP 1998-253962	19980908
	US 5914226	A	19990622	US 1997-927866	19970911
PRAI	US 1997-927866	A	19970911		
OS	MARPAT 131:11499				
GI					



AB The title element contains a **silver** halide **emulsion** containing >50 mol% **AgCl**, a **dithiolone-1-oxide** compound represented by I [b = C(O), C(S), C(Se), CH₂, (CH₂)₂; R1 and R2 = H, fatty acid, aromatic group, heterocyclic group, alkoxy, OH, halo, aryloxy; **alkylthio**, **arylthio**, acyl, SO₂, acyloxy, CO₂H, **cyano**, SO₃H, amino, atoms required for forming 5- or 6-membered

ring or polycyclic ring by R1 and R2], and a sulfinat. The **emulsion** has high heat stability, and the element has high storage stability and desensitization property at high temperature

IC ICM G03C001-34
ICS G03C001-035

CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST **silver** halide **photog emulsion**
dithiolone oxide; heat stability **silver** halide **photog emulsion**

IT **Photographic** films
(color; **silver** halide color **photog.** element containing **dithiolone-1-oxide** compound and sulfinat in **emulsion** for heat stability)

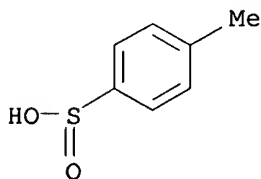
IT **Photographic emulsions**
(**silver** halide color **photog.** element containing **dithiolone-1-oxide** compound and sulfinat in **emulsion** for heat stability)

IT 824-79-3, Sodium p-toluenesulfinat 66304-00-5, 3H-1,2-Benzodithiol-3-one, 1-oxide
RL: MOA (Modifier or additive use); USES (Uses)
(**silver** halide color **photog.** element containing **dithiolone-1-oxide** compound and sulfinat in **emulsion** for heat stability)

IT 824-79-3, Sodium p-toluenesulfinat
RL: MOA (Modifier or additive use); USES (Uses)
(**silver** halide color **photog.** element containing **dithiolone-1-oxide** compound and sulfinat in **emulsion** for heat stability)

RN 824-79-3 HCAPLUS

CN Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

L47 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:333799 HCAPLUS

DN 129:21401

TI Preparation of hydrazine compounds and silver halide **photographic** photosensitive material using them

IN Suzuki, Hiroyuki; Yamada, Kozaburo; Takeuchi, Hiroshi; Ezoe, Toshihide; Hoshimiya, Takashi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 68 pp.
CODEN: JKXXAF

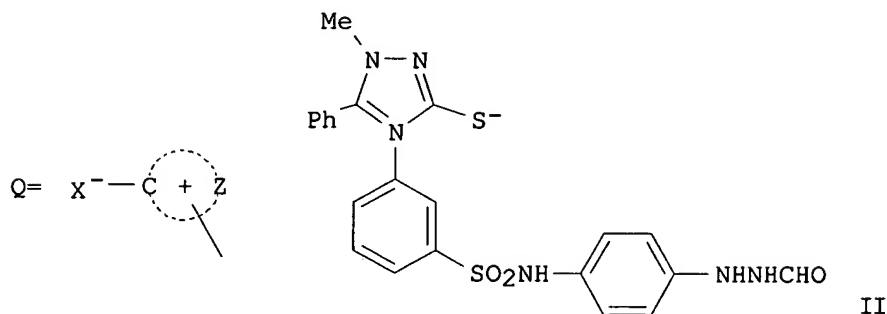
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10130275	A2	19980519	JP 1997-160283	19970617
	US 5981138	A	19991109	US 1997-923417	19970904
PRAI	JP 1996-234544	A	19960904		

GI



AB Hydrazine compds. represented by formula Ar1NHNHG1R1 (I; Ar1 = aromatic group; G1 = CO, SO₂, SO₂O, phosphoryl, oxalyl, NHCH₂; R1 = H, block group; at least one of Ar1 or R1 possesses a group linked to Ar1 or R1 directly or through a linkage group; Z = a group of atoms capable of forming a conjugated 5- or 6-membered unsatd. heterocyclic ring possessing a pos. charge; X⁻ = O⁻, S⁻, N⁻, N-R₂; R₂ = alkyl, alkenyl, alkynyl, aryl, heterocyclyl), which are useful as nucleating or fogging agents for super high-contrast neg. or direct pos. **photog.** materials, are prepared Also claimed is a silver halide **photog.** material containing I. This **photog.** material provides super high-contrast ($\gamma \geq 10$) **photog.** property using a stable developer and high processing stability, possesses excellent storability for printing plate making, and when added at a small quantity, exhibits sufficient reversibility even using a low-pH processing liquid Thus, N-[4-(formylhydrazino)phenyl]-4-thiocyanatobenzenesulfonamide (preparation given) underwent cycloaddn. reaction with N-benzoyl-N-methylhydrazine in the presence of Et₃N and SM-28 in MeCN/MeOH at 50° for 2 h to give the title compound (II).

IC ICM C07D521-00

ICS C07D249-12; C07D249-18; C07D263-16; C07D263-62; C07D271-04;
C07D271-10; C07D273-00; C07D285-06; C07D285-08; C07D285-125;
C07D285-13; C07D285-135; C07D401-04; C07D401-12; C07D401-14;
C07D403-04; C07D409-04; C07D413-12; C07D417-04

CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST hydrazine compd prepn nucleating agent; fogging agent hydrazine deriv;
super high contrast neg **photog** film; direct pos **photog**
film; printing plate making

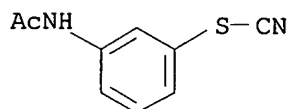
IT **Photographic** films

Printing plates

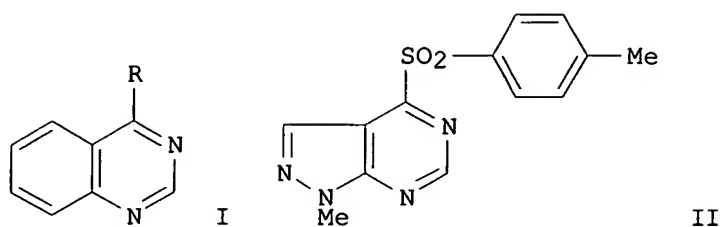
(preparation of hydrazine derivs. as nucleating or fogging agents for super high-contrast neg. or direct pos. **photog.** materials)

IT 99-09-2, 3-Nitroaniline 108-24-7, Acetic anhydride 121-51-7,
m-Nitrobenzenesulfonyl chloride 541-41-3, Ethyl chloroformate 699-30-9
3530-13-0, N-Acetyl-N-methylhydrazine 6160-65-2, Thiocarbonyl
diimidazole 63402-26-6, N-(p-Aminophenyl)-N'-formylhydrazine
63402-33-5, N-(p-Aminophenyl)-N'-(trifluoroacetyl)hydrazine 207557-88-8

RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of hydrazine derivs. as nucleating or fogging agents for super
 high-contrast neg. or direct pos. **photog.** materials)
 IT 102-28-3P 122-28-1P **23905-50-2P** 75753-05-8P 111982-96-8P
 163973-03-3P 207557-89-9P 207557-92-4P 207557-94-6P 207557-96-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of hydrazine derivs. as nucleating or fogging agents for super
 high-contrast neg. or direct pos. **photog.** materials)
 IT 207557-69-5P 207557-70-8P 207557-71-9P 207557-72-0P 207557-73-1P
 207557-74-2P 207557-75-3P 207557-76-4P 207557-77-5P 207557-78-6P
 207557-79-7P 207557-80-0P 207557-81-1P 207557-82-2P 207557-83-3P
 207557-84-4P 207557-85-5P 207557-86-6P 207557-87-7P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (preparation of hydrazine derivs. as nucleating or fogging agents for super
 high-contrast neg. or direct pos. **photog.** materials)
 IT **23905-50-2P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of hydrazine derivs. as nucleating or fogging agents for super
 high-contrast neg. or direct pos. **photog.** materials)
 RN 23905-50-2 HCAPLUS
 CN Thiocyanic acid, 3-(acetylamino)phenyl ester (9CI) (CA INDEX NAME)

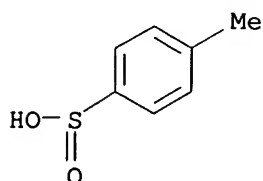


L47 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1997:318976 HCAPLUS
 DN 127:50552
 TI Electrophilic cyanations. I. Synthesis of thiocyanato heteroarenes and
 tosylheteroarenes from mercapto heteroarenes using p-toluenesulfonyl
 cyanide
 AU Miyashita, Akira; Nagasaki, Izuru; Kawano, Akiko; Suzuki, Yumiko; Iwamoto,
 Ken-ichi; Higashino, Takeo
 CS School Pharmaceutical Sciences, Univ. Shizuoka, Shizuoka, 422, Japan
 SO Heterocycles (1997), 45(4), 745-755
 CODEN: HTCYAM; ISSN: 0385-5414
 PB Japan Institute of Heterocyclic Chemistry
 DT Journal
 LA English
 OS CASREACT 127:50552
 GI



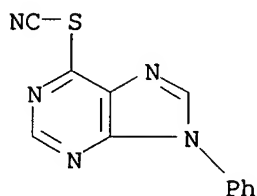
- AB Mercaptoheteroarenes, e.g., quinazoline I (R = SH), underwent electrophilic cyanation with p-toluenesulfonyl cyanide (TsCN) in THF in the presence of NaH to give the corresponding thiocyanatoheteroarenes, e.g., I (R = SCN), in moderate to good yields. In DMF, tosylheteroarenes, e.g., pyrazolopyrimidine II, were formed by substitution with p-toluenesulfinate ion through thiocyanatoheteroarenes.
- CC 28-1 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 27
- ST mercaptoheteroarene cyanation toluenesulfonyl cyanide;
thiocyanatoheteroarene prepn; heteroarene thiocyanato tosyl prepn;
tosylheteroarene prepn
- IT Cyanation
(preparation of tosyl- and thiocyanatoheteroarenes by cyanation of mercaptoheteroarenes with toluenesulfonyl cyanide)
- IT 2127-03-9P, Di-2-pyridyl disulfide 2889-13-6P 190263-15-1P
RL: BYP (Byproduct); PREP (Preparation)
(preparation of tosyl- and thiocyanatoheteroarenes by cyanation of mercaptoheteroarenes with toluenesulfonyl cyanide)
- IT 137-07-5, 2-Mercaptoaniline 149-30-4, 2(3H)-Benzothiazolethione 491-36-1, 4(1H)-Quinazolinone 583-39-1 **824-79-3**, Sodium p-toluenesulfinate 1450-85-7, 2(1H)-Pyrimidinethione 2637-34-5, 2(1H)-Pyridinethione 2637-37-8, 2(1H)-Quinolinethione 4702-25-4, 1(2H)-Isoquinolinethione 5190-68-1 5334-48-5 6484-25-9 7065-92-1 17466-00-1 19158-51-1, 4-Toluenesulfonyl cyanide 21314-09-0 23000-43-3 40493-18-3 190263-05-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of tosyl- and thiocyanatoheteroarenes by cyanation of mercaptoheteroarenes with toluenesulfonyl cyanide)
- IT 3337-86-8P, 4(1H)-Quinazolinethione 6014-06-8P 6014-07-9P 6483-99-4P 13925-53-6P 40277-39-2P 58861-61-3P 190263-06-0P 190263-09-3P **190263-13-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tosyl- and thiocyanatoheteroarenes by cyanation of mercaptoheteroarenes with toluenesulfonyl cyanide)
- IT 136-95-8P, 2-Benzothiazolamine 2637-35-6P 2637-38-9P 5285-94-9P 6011-99-0P 21802-54-0P 62141-41-7P 66421-39-4P 75077-89-3P 76195-92-1P 89283-87-4P **190263-07-1P 190263-08-2P** 190263-10-6P 190263-11-7P **190263-12-8P 190263-14-0P** 190263-16-2P 190263-17-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of tosyl- and thiocyanatoheteroarenes by cyanation of mercaptoheteroarenes with toluenesulfonyl cyanide)
- IT **824-79-3**, Sodium p-toluenesulfinate
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of tosyl- and thiocyanatoheteroarenes by cyanation of mercaptoheteroarenes with toluenesulfonyl cyanide)

RN 824-79-3 HCAPLUS
CN Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)

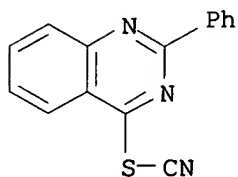


● Na

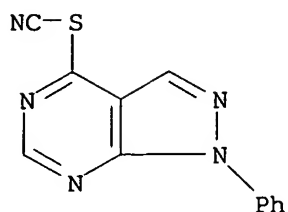
IT 190263-13-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tosyl- and thiocyanatoheteroarenes by cyanation of mercaptoheteroarenes with toluenesulfonyl cyanide)
RN 190263-13-9 HCAPLUS
CN Thiocyanic acid, 9-phenyl-9H-purin-6-yl ester (9CI) (CA INDEX NAME)



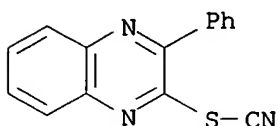
IT 190263-07-1P 190263-08-2P 190263-12-8P
190263-14-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of tosyl- and thiocyanatoheteroarenes by cyanation of mercaptoheteroarenes with toluenesulfonyl cyanide)
RN 190263-07-1 HCAPLUS
CN Thiocyanic acid, 2-phenyl-4-quinazolinyl ester (9CI) (CA INDEX NAME)



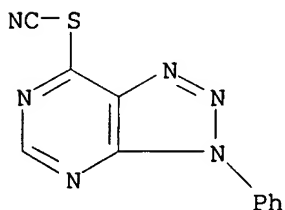
RN 190263-08-2 HCAPLUS
CN Thiocyanic acid, 1-phenyl-1H-pyrazolo[3,4-d]pyrimidin-4-yl ester (9CI)
(CA INDEX NAME)



RN 190263-12-8 HCAPLUS
CN Thiocyanic acid, 3-phenyl-2-quinoxalinylnyl ester (9CI) (CA INDEX NAME)



RN 190263-14-0 HCAPLUS
CN Thiocyanic acid, 1-phenyl-1H-1,2,3-triazolo[4,5-d]pyrimidin-4-yl ester (9CI) (CA INDEX NAME)



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:571564 HCAPLUS

DN 125:208339

TI **Silver** halide **photographic emulsion** with
localized phase containing **cyanometal** complex providing improved
speed/fog ratio

IN Kaga, Makoto; Tanaka, Shigeo

PA Konishiroku Photo Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 33 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08171155	A2	19960702	JP 1994-314821	19941219
PRAI	JP 1994-314821		19941219		

AB The **photog. emulsion** has the following
characteristics; (1) the grains have **AgCl** content of ≥ 95

mol%, (2) they have localized microphases containing ≥ 10 times higher concentration of **cyano-metal** complex than other parts of the grains, (3) the phases rich in **cyano-metal** complex are localized in the surface layer sharing outer 50% (volume-wise) of the grain, (4) the crystallization to impregnate the **cyano-metal** complex is conducted at pH ≥ 7 , and (5) the **emulsion** is added by a compound selected from (a) a compound containing a structure comprising chain of ≥ 3 S, Se, or Te atoms, (b) a heterocyclic organic compound containing ≥ 2 S, Se, or Te atoms separated by other atom(s) from each other, (c) a compound represented by the formula $R11X11X12R12$ ($R11, R12$ = atom group to form cyclic or non-cyclic mol.; $X11, X12$ = S, Se, Te) and (d) inorg. sulfur, **thiosulfonate**, $R21SO2SM21$ ($R21$ = aliphatic, aromatic, heterocyclic compound; $M21$ = cation, H), or $R31X31O2M31$ ($X31$ = S, Se; $M31$ and $R31$ same as $M21$ and $R21$). The **emulsion** has high sensitivity and low fog, reduced failure from reciprocity law, and good production consistency, and is particularly suitable for the application to **photog. color** paper.

IC ICM G03C001-015
ICS G03C001-035; G03C001-07; G03C001-09; G03C001-10

CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST **silver** halide **photog emulsion** making;
cyano metal complex **photog emulsion**;
polythio compd additive **photog emulsion**;
polyseleno compd additive **photog emulsion**; **polytelluro** compd additive **photog emulsion**

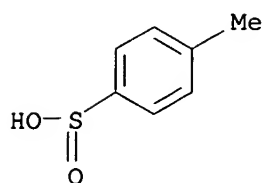
IT **Photographic emulsions**
(**Ag** halide **photog. emulsion** with localized phase containing **cyanometal** complex for high speed/fog ratio)

IT 103-34-4 722-27-0 **824-79-3** 930-35-8, 1,3-Dithiole
-2-thione 971-15-3 1077-28-7, 1,2-Dithiolane
-3-pentanoic acid 7704-34-9, Sulfur, uses 13943-58-3, Tetrapotassium
hexacyanoferrate 14874-33-0, Tetrapotassium
hexacyanorhenate 15002-31-0, Tetrapotassium
hexacyanoruthenate 16766-09-9 16920-56-2, Dipotassium
hexachloroiridate 28519-50-8 165116-09-6 165116-10-9 181018-64-4,
Benzo[b]thiophene-2,3-dithione
RL: TEM (Technical or engineered material use); USES (Uses)
(**Ag** halide **photog. emulsion** with localized phase containing **cyanometal** complex for high speed/fog ratio)

IT **824-79-3**
RL: TEM (Technical or engineered material use); USES (Uses)
(**Ag** halide **photog. emulsion** with localized phase containing **cyanometal** complex for high speed/fog ratio)

RN 824-79-3 HCAPLUS

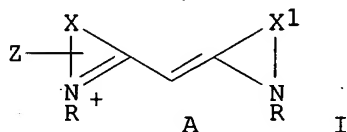
CN Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

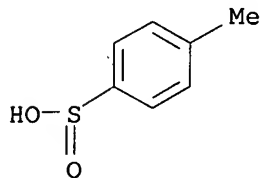
L47 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1996:377081 HCAPLUS
 DN 125:44966
 TI Blue-sensitized **silver** halide **emulsion** with particular
 addenda
 IN Johansson, Katy Pat; Lok, Roger
 PA Eastman Kodak Company, USA
 SO Eur. Pat. Appl., 24 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 709726	A1	19960501	EP 1995-202906	19951026
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	JP 08211534	A2	19960820	JP 1995-283479	19951031
PRAI	US 1994-331786	A	19941031		
OS	MARPAT 125:44966				
GI					



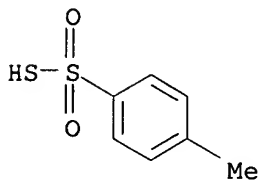
AB A **silver** halide **photog.** element comprises a
silver halide **emulsion** sensitized by a blue dye of
 formula I (X, X1 = the atoms necessary to complete a 5- or 6-membered
 heterocyclic nucleus, X may be further substituted and X1 is substituted
 or unsubstituted; R, R1 = substituted or unsubstituted aryl or alkyl; Z =
 substituted or unsubstituted aryl or heteroaryl; A = counterion as needed
 to balance the charge of the mol.) and the **emulsion** also
 contains a **thiosulfonate**, a **sulfinate**, and an **alkynylamine**.
 IC ICM G03C001-10
 ICS G03C001-34
 CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and
 Other Reprographic Processes)
 ST blue dye spectral **photog** sensitizer; **silver** halide
photog emulsion thiosulfonate; **alkynylamine**

silver halide photog emulsion
 IT Photographic sensitizers
 (blue cyanine dyes as)
 IT Photographic emulsions
 (blue-sensitized; containing thiosulfonates, sulfinates, and
 alkynylamines)
 IT 159632-55-0 161710-68-5 177951-67-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photog. spectral sensitizer for blue-sensitized
 silver halide emulsions)
 IT 824-79-3 3753-27-3 89705-82-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (silver halide photog. emulsions containing)
 IT 824-79-3 3753-27-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (silver halide photog. emulsions containing)
 RN 824-79-3 HCAPLUS
 CN Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 3753-27-3 HCAPLUS
 CN Benzenesulfonothioic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

L47 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1996:171809 HCAPLUS
 DN 124:232500
 TI Preparation of aromatic amine substituted bridged nitrogen and sulfur
 donor atom ligands for imaging
 IN Kasina, Sudhaker; Yau, Eric; Reno, John M.
 PA Neorx Corp., USA
 SO PCT Int. Appl., 88 pp.

CODEN: PIXXD2

DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9532192	A1	19951130	WO 1995-US6522	19950518
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2190727	AA	19951130	CA 1995-2190727	19950518
	EP 759913	A1	19970305	EP 1995-922106	19950518
	EP 759913	B1	20000301		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10500953	T2	19980127	JP 1995-530506	19950518
	AT 190053	E	20000315	AT 1995-922106	19950518
	US 6024937	A	20000215	US 1995-463232	19950605
PRAI	US 1994-250713	A	19940519		
	WO 1995-US6522	W	19950518		
OS	MARPAT 124:232500				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Aromatic amine substituted metal chelating compds., bis(mercaptoaniline and aminoanilino) compds., [I; n = 0,1; R1, R2 = H, O (provided that both R1 = R2 ≠ O), (CH2)mZ; wherein m = 0-10; Z = a conjugate group or a hydrolyzable group; or R1R2 = a cyclic anhydride or benzene ring; R3 = H, (un)substituted alkyl, alkoxy, perhaloalkyl, halo, OH, NO2, (CH2)mZ; R4, R5 = one or more groups selected from the groups listed in R3; A, Al = N, O, or S, where a sulfur may bear a H or a sulfur protecting group, or where A and Al are both S, A and Al may joined together by a bond; where an oxygen may bear a H; where a nitrogen may bear H, HO, or a alkyl; or where both A and Al are both N, A and Al may be joined together by CH2CH2 or (CH2)3; X, Y, X1 = C or N; α and β represent C atoms which may bear a C-N double bond; said compound have at least one Z], chelates, and chelate-targeting moiety conjugates formed from the chelating compds., useful as diagnostics and therapeutics, are prepared Metals capable of being chelated by the chelating compds. include radionuclides, such as 99mTc and 186/188Re. Thus, 2.065 g Et 4-aminobenzoate, 14.35 mL 1,3-diiodopropane, and 10.5 g NaHCO3 in 500 mL DMF were heated at 110° for 3 h to give p-EtO2C C6H4NH(CH2)3NHC6H4CO2Et-p, which (10.0 g) was suspended in 1,500 mL glacial AcOH, treated dropwise with a solution of 34.6 g Br in 100 mL glacial AcOH, and stirred at room temperature overnight to give 1,3-bis(benzothiazol-3-yl)propane derivative (II). A suspension of the latter compound (1.0 g) in H2O was treated with 20.0 g KOH, heated at 120° for 12 h, cooled in an ice bath, and adjusted to pH 5.0 with 5.0 N AcOH, and extracted with EtOAc to give the disulfide intermediate (III; R = OH, R6 = HO2C), which was esterified with EtOH in the presence of HCl to give the di-Et ester III (R = OEt, R6 = EtO2C). A solution (170 µg/mL, 0.6 mL) of the latter compound was added to a solution (1.1. mL) of Tc-99m gluconate (prepared from 0.12 mg stannous chloride dihydrate, 5.0 mg sodium gluconate at pH 6.1-6.3, and 100 mCi/mL of Tc-99m pertechnetate) and incubated at room temperature for 15-30 min to give, after purification by reverse

phase chromatog., the Tc-chelate (R = OEt, R6 = EtO2C). In one example, II (R = succinimidyl, R6 = Me) was prepared, conjugated with annexin V

(placental anticoagulant protein) to the annexin V conjugate II (R = annexin residue, R6 = Me), and similarly treated with Tc-99m gluconate to give the Tc chelate-annexin V conjugate II (R = annexin residue, R6 = Me). The latter conjugate binds to activated platelets and is useful in visualizing blood clots (no data).

- IC ICM C07D285-00
ICS C07C323-63; C07D417-12; C07K014-745; C07C229-60; C07C239-18; A61K051-04
- CC 28-23 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 74
- ST arom amine metal chelating compd prepn; mercaptoaniline metal chelating compd prepn; imaging agent mercaptoaniline metal chelating compd; phenylenediamine metal chelating compd prepn; radionuclide chelate prepn imaging agent; blood clot imaging
- IT Chelating agents
(preparation of bis(mercaptoanilino or aminoanilino)alkane ligands as metal chelating agents and metal chelates for imaging)
- IT Thrombus and Blood clot
(preparation of bis(mercaptoanilino)propane-annexin V conjugate Tc-99m chelate for imaging blood clots)
- IT Annexins
RL: RCT (Reactant); RACT (Reactant or reagent)
(V, preparation of bis(mercaptoanilino or aminoanilino)alkane ligands as metal chelating agents and metal chelates for imaging)
- IT Imaging
(agents, preparation of bis(mercaptoanilino or aminoanilino)alkane ligands as metal chelating agents and metal chelates for imaging)
- IT Radiography
(contrast agents, preparation of bis(mercaptoanilino or aminoanilino)alkane ligands as metal chelating agents and metal chelates for imaging)
- IT 174564-00-2P 174564-01-3P 174564-02-4P 174564-03-5P 174564-04-6P
174564-06-8P 174564-07-9P 174564-08-0P 174564-09-1DP, conjugate with annexin V 174564-10-4P 174564-11-5P 174564-12-6P 174564-13-7P
174564-15-9P 174564-16-0P 174796-87-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of bis(mercaptoanilino or aminoanilino)alkane ligands as metal chelating agents and metal chelates for imaging)
- IT 88-74-4, 2-Nitroaniline 94-09-7, Ethyl 4-aminobenzoate 95-54-5, 1,2-Phenylenediamine, reactions 98-59-9, p-Toluenesulfonyl chloride 104-94-9, 4-Methoxyaniline 106-49-0, 4-Methylaniline, reactions 108-24-7, Acetic anhydride 124-63-0, Methanesulfonyl chloride 371-40-4, 4-Fluoroaniline 612-28-2, N-Methyl-2-nitroaniline 627-31-6, 1,3-Diiodopropane 627-32-7, 3-Iodo-1-propanol 762-21-0, Diethyl acetylenedicarboxylate 1762-95-4, Ammonium thiocyanate 2251-50-5, Perfluorobenzoyl chloride 2486-69-3, 4-Amino-3-methoxybenzoic acid 6393-40-4, 4-Cyano-2-nitroaniline 14794-31-1, Ethyl succinyl chloride 24424-99-5, Di-tert-butyl dicarbonate 36679-81-9, 3-Hydroxymethyl-4-butanolide 125072-37-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of bis(mercaptoanilino or aminoanilino)alkane ligands as metal chelating agents and metal chelates for imaging)
- IT 7418-33-9P 21708-38-3P 22902-29-0P 30381-69-2P 50850-93-6P
73368-41-9P 102017-01-6P 102449-89-8P 125880-90-2P 174564-14-8P
174564-17-1P 174564-18-2P 174564-19-3P 174564-20-6P 174564-21-7P
174564-22-8P 174564-23-9P 174564-24-0P 174564-25-1P 174564-26-2P
174564-27-3P 174564-28-4P 174564-29-5P 174564-30-8P 174564-31-9P
174564-32-0P 174564-33-1P 174564-34-2P 174564-35-3P 174564-36-4P

174564-37-5P 174564-38-6P 174564-39-7P 174564-40-0P 174564-41-1P
 174564-42-2P 174564-43-3P 174564-44-4P 174564-45-5P 174564-46-6P
 174564-47-7P 174564-48-8P 174564-49-9P **174564-50-2P**
174564-51-3P 174564-52-4P 174564-53-5DP, conjugate
 with annexin V 174564-54-6P 174564-55-7P 174564-56-8P 174564-57-9P
 174564-58-0P 174564-59-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(preparation of bis(mercaptoanilino or aminoanilino)alkane ligands as metal
 chelating agents and metal chelates for imaging)

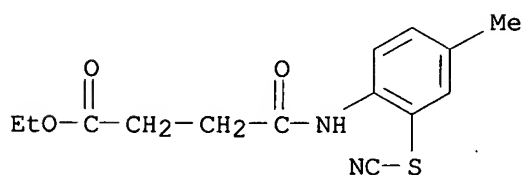
IT **174564-50-2P 174564-51-3P 174564-52-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(preparation of bis(mercaptoanilino or aminoanilino)alkane ligands as metal
 chelating agents and metal chelates for imaging)

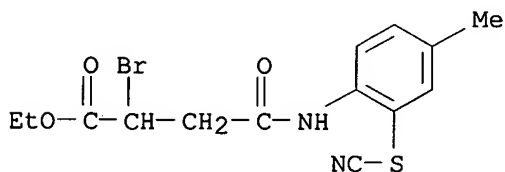
RN 174564-50-2 HCAPLUS

CN Butanoic acid, 4-[(4-methyl-2-thiocyanatophenyl)amino]-4-oxo-, ethyl ester
 (9CI) (CA INDEX NAME)



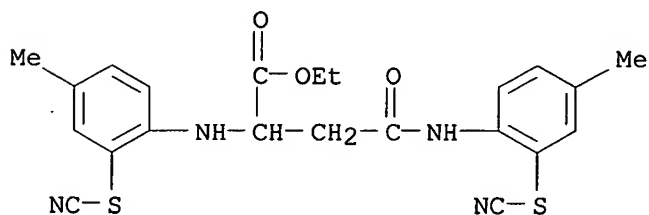
RN 174564-51-3 HCAPLUS

CN Butanoic acid, 2-bromo-4-[(4-methyl-2-thiocyanatophenyl)amino]-4-oxo-,
 ethyl ester (9CI) (CA INDEX NAME)



RN 174564-52-4 HCAPLUS

CN Asparagine, N,N2-bis(4-methyl-2-thiocyanatophenyl)-, ethyl ester (9CI)
 (CA INDEX NAME)



DN 121:121633
 TI High chloride tabular grain **emulsions** and processes for their preparation
 IN House, Gary L.; Brust, Thomas B.; Hartsell, Debra L.; Black, Donald L.; Antoniades, Michael G.; Budz, Jerzy A.; Chang, Yun C.; Lok, Roger; Puckett, Sherrill A.; Tsaur, Allen K.
 PA Eastman Kodak Co., USA
 SO U.S., 70 pp. Cont.-in-part of U.S. Ser. No. 34,060, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5320938	A	19940614	US 1993-112489	19930825
	AU 9225994	A1	19930427	AU 1992-25994	19920902
	EP 617320	A2	19940928	EP 1994-104414	19940321
	EP 617320	A3	19950201		
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	JP 06301139	A2	19941028	JP 1994-75404	19940322
PRAI	US 1992-826338	B2	19920127		
	US 1992-940404	B2	19920903		
	US 1993-34060	B2	19930322		
	US 1993-34317	A	19930322		
	US 1991-764868	A	19910924		
	WO 1992-US7549	A	19920902		

AB **Ag** halide **emulsions** are disclosed in which at least 50% of total gain projected area is accounted for by tabular grains (1) bounded by {100} major faces having adjacent edge ratios of <10, (2) each having an aspect ratio of at least 2, and (3) internally at their nucleation site containing iodide and at least 50 mol percent chloride. The **emulsions** are prepared by a process comprised of the steps of (1) introducing **Ag** and halide salts into a dispersing medium so that nucleation of the tabular grains occurs in the presence of iodide with chloride accounting for at least 50 mol percent of the halide present in the dispersing medium and the pCl of the dispersing medium being maintained in the range of from 0.5 to 3.5 and (b) following nucleation completing grain growth under conditions that maintain the {100} major faces of the tabular grains.

IC ICM G03C001-005
 ICS G03C001-015; G03C001-09; G03C001-34

NCL 430567000

CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST chloride tabular grain **emulsion**

IT **Photographic** stabilizers
 (heterocyclic azole compds.)

IT **Photographic emulsions**
 (tabular grain high chloride)

IT 86-93-1 106-51-4, Benzoquinone, uses 824-79-3, Sodium p-toluenesulfinate 1077-28-7, 1,2-Dithiolane-3-pentanoic acid 2382-96-9, 2(3H)-Benzoxazolethione 3004-42-0 7414-96-2 14070-48-5, 1-(3-Acetamidophenyl)-5-mercaptotetrazole 16766-09-9 21658-64-0 28519-50-8, Potassium p-tolylthiosulfonate 35523-67-2 41081-77-0 53662-43-4 89853-03-2 93954-42-8 130017-19-5 156645-27-1 156645-28-2 156645-30-6 156645-31-7 156645-33-9 156645-34-0 156645-35-1 156645-36-2, 1,4-Dioxo-7,8-diselenaspiro[4.4]nonane
 RL: USES (Uses)

(**photog.** stabilizer)

IT 3425-46-5, Potassium **selenocyanate** 13682-61-6, Potassium tetrachloroaurate 13845-07-3 15002-31-0 16920-56-2, Potassium hexachloroiridate 81544-91-4 156645-25-9 156645-26-0 156920-63-7 156920-64-8
 RL: USES (Uses)

(**silver** halide tabular grain **emulsion** with)

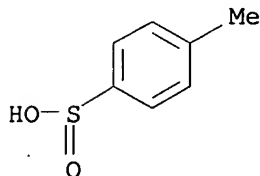
IT 56-40-6, Glycine, uses 63-68-3, **Methionine**, uses 288-32-4, Imidazole, uses 540-72-7, Sodium **thiocyanate** 5244-34-8, 1,8-Dihydroxy-3,6-dithiaoctane 7757-83-7, Sodium sulfite 156645-37-3 156645-38-4, 2,5-Dithiasuberic acid
 RL: USES (Uses)

(**silver** halide tabular grain growth accelerator)

IT 824-79-3, Sodium p-toluenesulfinate
 RL: USES (Uses)

(**photog.** stabilizer)

RN 824-79-3 HCAPLUS
 CN Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



L47 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:204455 HCAPLUS

DN 120:204455

TI **Silver** halide **photographic** material

IN Uchida, Mitsuhiro

PA Fuji Photo Film Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 57 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

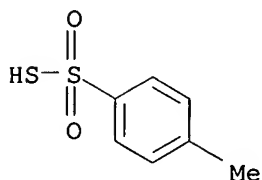
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05165132	A2	19930629	JP 1991-350410	19911211
PRAI	JP 1991-350410		19911211		

AB A **silver** halide **photog.** material possesses at least one **silver** halide layer spectrally sensitized by monomethine and/or trimethine **cyanine** dye and containing regular crystals of double or higher layered **silver** halide grains on a support. The regular crystal **silver** halide grains possess a reduction-sensitized layer inside the grain and a substantially non-reduction-sensitized outermost layer of 0.005-0.2 μm thickness. These grains are substantially cubes and the iodine (derived from **AgI**) content of the outermost layer surface is higher than the average iodine content of the entire grain. Preferably the said outermost **silver** halide layer is formed in

the presence of RSO₂SM, RSO₂SR₁, RSO₂S-Lm-SSO₂R₂, or polymers having bivalent repeating units derived from these compds., (wherein R - R₂ = monovalent aliphatic, aromatic, or heterocyclic group; M = cation; L = divalent linkage group; m = 0,1). A unique combination of reduction sensitization and spectral sensitization provides **silver** halide **emulsion** with high sensitivity, reduced fog, and excellent storage stability.

- IC ICM G03C001-015
ICS G03C001-035; G03C001-08; G03C001-16; G03C001-18
- CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
- ST **silver** halide **emulsion**; spectrally sensitized **silver** halide **emulsion**; redn sensitized **silver** halide **emulsion**; methine **cyanine** dye spectral sensitizer; regular crystal layered **silver** halide
- IT **Photographic emulsions**
(regular crystal, layered **silver** halide grains spectrally sensitized by methine **cyanine** dye, reduction-sensitized, and having non-reduction sensitized layer, for high sensitivity, reduced fog, and excellent storage stability)
- IT 3753-27-3
RL: USES (Uses)
(formation of outermost layers of spectrally sensitized and reduction-sensitized **silver** halide grains in presence of, in manufacture of **photog. emulsion**)
- IT 1758-73-2, **Thiourea** dioxide
RL: USES (Uses)
(reduction sensitizer, **silver** halide grains reduction-sensitized with, **photog. emulsion** containing)
- IT 60760-51-2 98835-03-1 117541-43-2 141862-36-4
RL: USES (Uses)
(spectral sensitizer, reduction-sensitized **silver** halide grains sensitized with, **photog. emulsion** containing)
- IT 3753-27-3
RL: USES (Uses)
(formation of outermost layers of spectrally sensitized and reduction-sensitized **silver** halide grains in presence of, in manufacture of **photog. emulsion**)
- RN 3753-27-3 HCAPLUS
- CN Benzenesulfonothioic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

- L47 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
- AN 1992:581503 HCAPLUS
- DN 117:181503
- TI Catalytic systems derived from a nickel dithiolene-like complex for the

photo-oxidation of alkylaromatic compounds. [Erratum to document cited in
 CA116(14):139854p]

AU Monaci, Anna; Tarli, Franco; Chiozzini, Gianni; Riccucci, Cristina
 CS Dip. Chim., Univ. La Sapienza, Rome, 00185, Italy
 SO Journal of Photochemistry and Photobiology, A: Chemistry (1992), 66(2),
 259
 CODEN: JPPCEJ; ISSN: 1010-6030

DT Journal
 LA English

AB An error in the text has been corrected The error was not reflected in the
 abstract or the index entries.

CC 74-1 (Radiation Chemistry, Photochemistry, and **Photographic** and
 Other Reprographic Processes)
 Section cross-reference(s): 22

ST erratum arom compd photooxidn; nickel dithiolene catalyst photooxidn
 erratum

IT Electron exchange and Charge transfer
 (photochem., in nickel dithiolene-like complex catalyzed photooxidn. of
 alkylarom. compds. (Erratum))

IT Oxidation catalysts
 (photochem., nickel dithiolene-like complex, for alkylarom. compds.
 (Erratum))

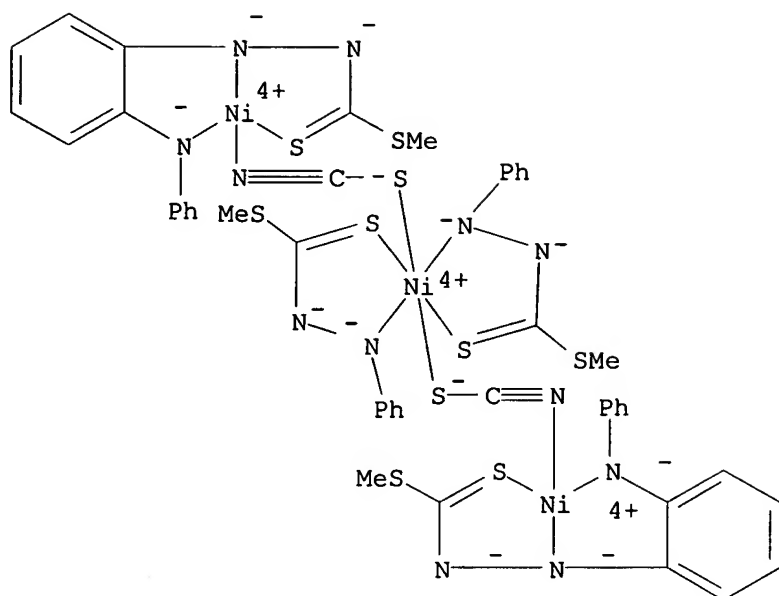
IT 92389-22-5
 RL: USES (Uses)
 (UV irradiation and thermal treatment of, for photooxidn. catalysts for
 alkylarom. compds. (Erratum))

IT 110277-16-2 110277-20-8 **139467-62-2**
 RL: CAT (Catalyst use); USES (Uses)
 (photooxidn. catalysts, for alkylarom, compds. (Erratum))

IT 95-93-2 98-85-1 100-51-6, Benzenemethanol, reactions 487-68-3
 4393-05-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photooxidn. of, nickel dithiolene-like complex catalysts for
 (Erratum))

IT **139467-62-2**
 RL: CAT (Catalyst use); USES (Uses)
 (photooxidn. catalysts, for alkylarom, compds. (Erratum))

RN 139467-62-2 HCAPLUS
 CN Nickel, bis[methyl 2-[2-(phenylamino)phenyl]hydrazinecarbodithioato(3-)-
 N2,N2',S1']bis[methyl 2-phenylhydrazinecarbodithioato(2-)-N2,S1']bis[μ-
 (thiocyanato-N:S)]tri- (9CI) (CA INDEX NAME)



L47 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1992:139854 HCAPLUS

DN 116:139854

TI Catalytic systems derived from a nickel dithiolene-like complex for the photo-oxidation of alkylaromatic compounds

AU Monaci, Anna; Tarli, Franco; Chiozzini, Gianni; Riccucci, Cristina

CS Dip. Chim., Univ. La Sapienza, Rome, 00185, Italy

SO Journal of Photochemistry and Photobiology, A: Chemistry (1991), 62(1), 117-23

CODEN: JPPCEJ; ISSN: 1010-6030

DT Journal

LA English

AB The dithiolene-like $\{Ni[NC_6H_5NC(S)SCH_3]_2\}$, either by UV irradiation in MeCN or by heating at 900° , leads to two catalytic systems (Niirr and Nitherm resp.) which are efficient photooxidizers of benzylic compds. The irradiations of solns. of toluene, xylene, durene, benzylic alcs. and trimethylbenzaldehyde in organic solvents, performed in an air stream in the presence of the two different catalytic systems give different products depending on the catalyst used: monooxygenated products in the presence of Niirr and mono- and polyoxygenated ones in the presence of Nitherm. The results obtained in both reactions suggest an initial electron transfer mechanism followed by a mechanism involving a radical chain process.

CC 74-1 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

Section cross-reference(s): 22

ST arom compd photooxidn nickel dithiolene catalyst

IT Electron exchange and Charge transfer

(photochem., in nickel dithiolene-like complex catalyzed photooxidn. of alkylarom. compds.)

IT Oxidation catalysts

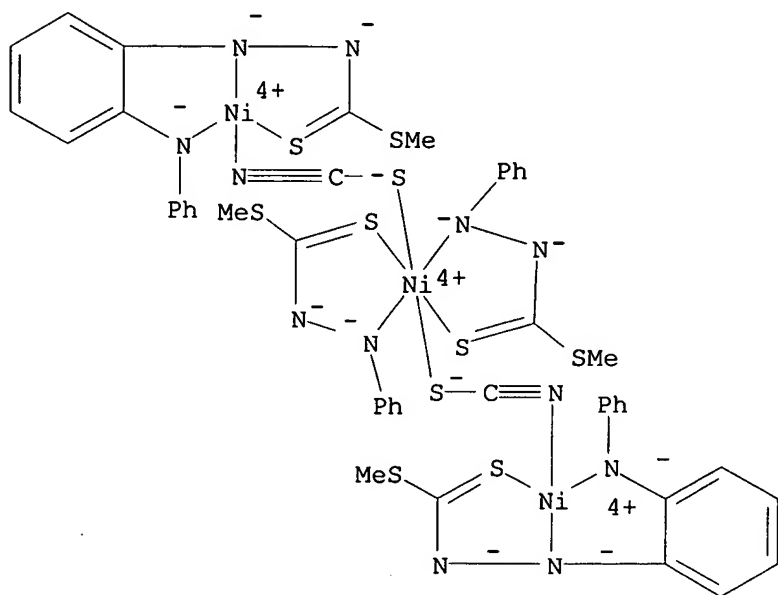
(photochem., nickel dithiolene-like complex, for alkylarom. compds.)

IT 92389-22-5

RL: USES (Uses)

(UV irradiation and thermal treatment of, for photooxidn. catalysts for

alkylarom. compds.)
 IT 110277-16-2D, derivs. 110277-20-8 **139467-62-2**
 RL: CAT (Catalyst use); USES (Uses)
 (photooxidn. catalysts, for alkylarom. compds.)
 IT 95-93-2 98-85-1 100-51-6, Benzyl alcohol, reactions 487-68-3,
 2,4,6-Trimethylbenzaldehyde 4393-05-9, 2,4,5-Trimethylbenzyl alcohol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photooxidn. of, nickel dithiolene-like complex catalysts for)
 IT **139467-62-2**
 RL: CAT (Catalyst use); USES (Uses)
 (photooxidn. catalysts, for alkylarom. compds.)
 RN 139467-62-2 HCAPLUS
 CN Nickel, bis[methyl 2-[2-(phenylamino)phenyl]hydrazinecarbodithioato(3-)-
 N2,N2',S1']bis[methyl 2-phenylhydrazinecarbodithioato(2-)-N2,S1']bis[μ-
 (thiocyanato-N:S)]tri- (9CI) (CA INDEX NAME)



L47 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1991:471056 HCAPLUS
 DN 115:71056
 TI A practical synthesis of aryl thiocyanates from arenesulfinates or
 arenesulfonyl chlorides with cyanotrimethylsilane
 AU Kagabu, Shinzo; Sawahara, Keisuke; Maehara, Masaki; Ichihashi, Sachiko;
 Saito, Katsuhiko
 CS Fac. Educ., Gifu Univ., Gifu, 501-11, Japan
 SO Chemical & Pharmaceutical Bulletin (1991), 39(3), 784-5
 CODEN: CPBTAL; ISSN: 0009-2363
 DT Journal
 LA English
 OS CASREACT 115:71056
 AB Reaction of RSO₂Na (R = Ph, substituted Ph, 2-naphthyl, 8-quinolinyl) with
 Me₃SiCN in HMPA gave 20-69% aryl thiocyanates. They were also obtained
 directly from RSO₂Cl using Me₃SiCN, Na₂SO₃ and K₂CO₃.
 CC 25-22 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 ST sodium arenesulfinate cyanotrimethylsilane reaction; arenesulfonyl

chloride cyanotrimethylsilane reaction; aryl thiocyanate

IT Thiocyanates
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (aryl, preparation of, from arenesulfates or arenesulfonyl chlorides with cyanotrimethylsilane)

IT 2645-24-1P 3012-37-1P 3226-37-7P 3226-41-3P **3321-94-6P**
 5285-74-5P 5285-87-0P, Phenyl thiocyanate 5285-90-5P 5285-93-8P
 5374-85-6P 16671-93-5P 35293-51-7P 82126-30-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, by the reaction of sodium arylsulfinate or arylsulfonyl chloride with cyanotrimethylsilane)

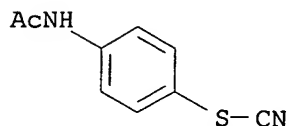
IT 7677-24-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with arenesulfates and arenesulfonyl chlorides, aryl thiocyanates by)

IT 93-11-8, 2-Naphthalenesulfonyl chloride 98-09-9, Benzenesulfonyl chloride 98-58-8, p-Bromophenylsulfonyl chloride 98-59-9, p-Tolylsulfonyl chloride 98-60-2, p-Chlorophenylsulfonyl chloride 98-68-0, p-Methoxyphenylsulfonyl chloride 585-47-7, 1,3-Benzenedisulfonyl dichloride 1939-99-7, Benzenemethanesulfonyl chloride 3406-84-6 6553-96-4 18704-37-5, 8-Quinolinesulfonyl chloride 19040-62-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cyanotrimethylsilane in presence of sodium sulfite, thiocyanate from)

IT **824-79-3**, Sodium p-tolyl sulfinate 873-55-2, Sodium benzenesulfinate 6462-50-6, Sodium 4-methoxyphenylsulfinate 14752-66-0, Sodium p-chlorophenylsulfinate 15898-43-8 34176-08-4, Sodium p-bromophenylsulfinate 60199-16-8 61081-36-5 63735-42-2 120570-12-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cyanotrimethylsilane, thiocyanate from)

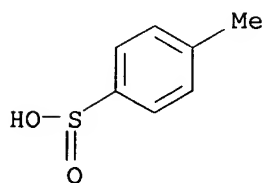
IT **3321-94-6P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, by the reaction of sodium arylsulfinate or arylsulfonyl chloride with cyanotrimethylsilane)

RN 3321-94-6 HCAPLUS
 CN Thiocyanic acid, 4-(acetylamino)phenyl ester (9CI) (CA INDEX NAME)



IT **824-79-3**, Sodium p-tolyl sulfinate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cyanotrimethylsilane, thiocyanate from)

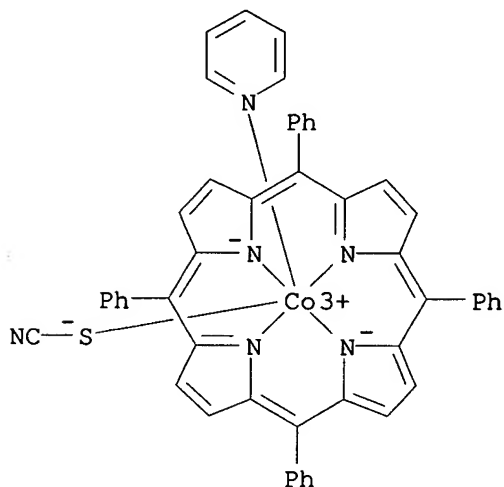
RN 824-79-3 HCAPLUS
 CN Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

L47 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1989:523545 HCAPLUS
 DN 111:123545
 TI Dual photodissociation of axial ligands in six-coordinate cobalt(III) tetraphenylporphyrins
 AU Hoshino, Mikio; Kogure, Mieko; Amano, Kazuo; Hinohara, Tadao
 CS Inst. Phys. Chem. Res., Wako, 351-01, Japan
 SO Journal of Physical Chemistry (1989), 93(18), 6655-9
 CODEN: JPCHAX; ISSN: 0022-3654
 DT Journal
 LA English
 AB Six-coordinate cobalt(III) tetraphenylporphyrins, XCoIIITPP(Py) (Py = pyridine, X = N3, Cl, SCN), exhibit dual photoreactions: the photoejection of axial pyridine and the photochem. homolysis of the X-Co bond. The former occurs from the metal excited $3(d\pi, dz^2)$ state, and the latter via intramol. electron transfer from the ligand X- to the $3(\pi, \pi^*)$ of XCoIIITPP(Py). The laser photolysis studies revealed that the quantum yields for each reaction measured upon 355-nm excitation are .apprx.3 times larger than that upon 532-nm excitation. The detailed mechanisms for the photoreaction of XCoIIITPP(Py) were discussed on the basis of the observation that the yield (0.12 ± 0.02) for the ejection of the axial pyridine is independent of both the nature of the ligand X- and the temps. in the range 290-343 K, while the yield for the homolysis of the X-Co bond markedly depends on the nature of the ligand X- as well as the temps.
 CC 74-1 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
 ST cobalt tetraphenylporphyrin photolysis dual reaction; photodissocn axial ligand cobalt phenylporphyrin
 IT Photolysis
 (of six-coordinate cobalt(III) tetraphenylporphyrins, dual photodissocn. of axial ligands in)
 IT Porphyrins
 RL: USES (Uses)
 (cobalt complexes, six-coordinate, dual photodissocn. of axial ligands in)
 IT Energy level transition
 (intersystem crossing, in photolysis of six-coordinate cobalt(III) tetraphenylporphyrins)
 IT 14172-90-8P 60166-10-1P 114055-75-3P 122114-26-5P
 RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, in photolysis of six-coordinate cobalt(III) tetraphenylporphyrins)
 IT 57384-22-2 122070-43-3 **122070-44-4**
 RL: RCT (Reactant); RACT (Reactant or reagent)

(photolysis of, dual dissociation of axial ligands in)
 IT 122070-44-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photolysis of, dual dissociation of axial ligands in)
 RN 122070-44-4 HCAPLUS
 CN Cobalt, (pyridine)[5,10,15,20-tetraphenyl-21H,23H-porphinato(2-)-
 N21,N22,N23,N24](thiocyanato-N)-, (OC-6-13)- (9CI) (CA INDEX NAME)



L47 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1987:608705 HCAPLUS
 DN 107:208705
 TI **Silver halide photographic emulsions**
 IN Ikeda, Tadashi; Takei, Haruo; Okazaki, Masaki
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 30 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

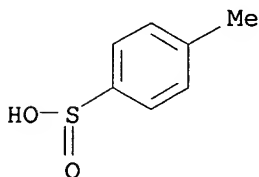
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62089038	A2	19870423	JP 1985-229540	19851015
PRAI	JP 1985-229540		19851015		

GI For diagram(s), see printed CA Issue.

AB The claimed **photog. emulsions** contain sensitizer dyes of the formulas I and/or II [Z1, Z2, Z3 = group of atoms required to complete heterocycles; Z1 and Z2 are thiazoline, thiazole, benzothiazole, naphthothiazole, selenazoline, selenazole, benzoselenazole, naphthoselenazole, or quinoline ring when m = 1; Q = rhodamine, 2-thiohydantoin, 2-thioselenazolidine-2,4-dione, 2-thioxazolidine-2,4-dione; R1, R2, R6, R7 = alkyl, aryl, alkenyl, aralkyl; R3 = H, or bond in a ring; R4, R5 = H, C≤4 alkyl, phenethyl, Ph; R3R4, R4R5, or R3R5 combinations may form an alkylene group to form a ring; R8, R9 = H, alkyl, aralkyl, aryl; R8 and R9 may combine to form ring; X- = anion; m = 1, 2; p, q, n, s, = 0, 1; r = 1, 2, 3] and a compound of the formula R10SO2M (R10 = Ph, naphthyl; M = H, alkali metal, alkaline earth metal, organic cation). The addition of sulfinic acids or their salts inhibits dye-desensitization phenomena.

IC ICM G03C001-12
 CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
 ST sensitizer **photog cyanine** dye; dye desensitization inhibition **photog**; benzenesulfinic acid dye desensitization inhibitor; naphthalenesulfinic acid dye desensitization inhibitor
 IT **Photographic emulsions**
 (containing sulfinic acids as dye-desensitization inhibitors)
 IT **Photographic sensitizers**
 (spectral, **cyanine** dyes as, inhibition of desensitization by)
 IT **824-79-3** 873-55-2 1709-60-0 63735-42-2 89520-66-1
 89520-67-2 111243-33-5 111243-34-6 111243-35-7
 RL: USES (Uses)
 (**photog.** dye-desensitization inhibitor)
 IT 18426-55-6 21155-21-5 53134-50-2 63737-55-3 95640-93-0
 99131-12-1 100235-01-6 106657-52-7 111243-36-8 111243-38-0
 111243-39-1 111243-40-4 111243-41-5 111275-16-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**photog.** spectral sensitizer, inhibition of dye-desensitization by)
 IT **824-79-3**
 RL: USES (Uses)
 (**photog.** dye-desensitization inhibitor)
 RN 824-79-3 HCAPLUS
 CN Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

L47 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1985:53863 HCAPLUS
 DN 102:53863
 TI Application of activated arylhydrazides to **silver** halide **photography**
 IN Hess, Thomas C.; Wiegers, Karl E.
 PA Eastman Kodak Co., USA
 SO U.S., 23 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4478928	A	19841023	US 1983-493480	19830511
	CA 1269877	A1	19900605	CA 1984-449601	19840314
	JP 59212828	A2	19841201	JP 1984-91947	19840510
	EP 130856	A2	19850109	EP 1984-400959	19840511

EP 130856 A3 19850814

EP 130856 B1 19870729

R: BE, DE, FR, GB, NL

PRAI US 1983-493480 A 19830511

AB The sulfinic acid radical substituted arylhydrazides are incorporated into **photog.** elements. In neg. working surface latent image **emulsions** these compds. permit higher speed or contrast to be achieved, whereas in direct pos. internal latent image forming **emulsions** they increase nucleation activity and reduce reversal. Thus, a coarse grain S-Au sensitized **Ag**(Br,I) radiog. **emulsion** was mixed with 2-methyl-2,4-pentanediol, gelatin, saponin, 4-hydroxy-6-methyl-1,3,3a,7-tetraazaindene, anhydro-5-chloro-9-ethyl-5'-phenyl-3'-(sulfoethyl-3-sulfoethyl)oxacarbocyanine hydroxide Na salt, 1-formyl-2-(4-methylphenylsulfonyl)-2-[4-(3-methyl-2-thioureido)phenyl]hydrazine at $0.38 + 10^{-6}$ mol/mol **Ag** and coated on a transparent support at 4.3 g **Ag**/m² and 4.8 g gelatin m². The dry coating was exposed for 1/50 s to simulated blue screen light and processed 3 min in an Elon developer at 20° to give an image with relative speed (measured at 0.3 above Dmin) and Dmin of 118 and 0.08, resp., vs. 100 and 0.06 for a hydrazine-free control.

IC G03C001-28; G03C001-36

NCL 430217000

CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)ST sulfinic acid hydrazide **photog emulsion**IT **Photographic emulsions**

(direct-pos., internal latent image forming, sulfinic acid radical substituted arylhydrazines for, for increased nucleation activity and reduced rereversal)

IT **Photographic emulsions**

(neg.-working, surface latent imaging forming, sulfinic acid radical substituted arylhydrazines for, for improved speed and contrast)

IT 6632-39-9

RL: USES (Uses)

(hydrogenation and reaction with sodium toluenesulfinate)

IT 94422-04-5 94422-05-6 94422-06-7 94422-07-8 94422-08-9

94422-09-0 94422-10-3 94422-11-4 94422-12-5 94422-13-6

94422-14-7 94422-15-8

RL: TEM (Technical or engineered material use); USES (Uses)

(**photog. emulsion** containing, for improved characteristics)

IT 107-41-5 2503-56-2

RL: TEM (Technical or engineered material use); USES (Uses)

(**photog. emulsion** containing, sulfinic acid radical substituted arylhydrazides for, for improved characteristics)

IT 28118-05-0 65767-18-2

RL: USES (Uses)

(**photog. emulsion** sensitized by, sulfinic acid radical substituted arylhydrazine derivs. for)

IT 94422-16-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and **photog.** applications of)

IT 94447-46-8P

RL: PREP (Preparation)

(preparation of, for **photog.** applications)

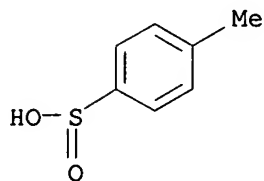
IT 92745-72-7P 94422-03-4P

RL: PREP (Preparation)

(preparation of, for **photog. emulsion** applications)

IT 1005-56-7 6160-65-2 40567-16-6

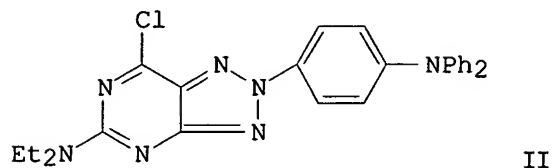
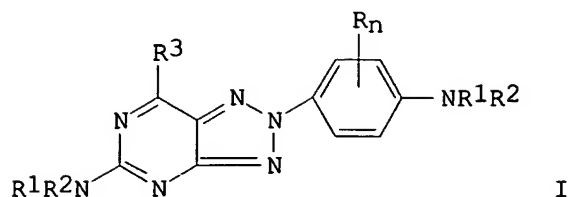
RL: USES (Uses)
 (reaction with (aminophenyl)formyl(methylphenylsulfonyl)hydrazine)
 IT 824-79-3
 RL: USES (Uses)
 (reaction with hydrogenated formyl(nitrophenyl)hydrazine)
 IT 824-79-3
 RL: USES (Uses)
 (reaction with hydrogenated formyl(nitrophenyl)hydrazine)
 RN 824-79-3 HCAPLUS
 CN Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

L47 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1985:36674 HCAPLUS
 DN 102:36674
 TI 2H-v-Triazolyl[4,5-d]pyrimidines and their use
 IN Albert, Bernhard; Hoffman, Gerhard; Neumann, Peter
 PA BASF A.-G. , Fed. Rep. Ger.
 SO Ger. Offen., 40 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3304330	A1	19840809	DE 1983-3304330	19830209
	EP 116341	A1	19840822	EP 1984-101041	19840202
	EP 116341	B1	19860507		
	R: CH, DE, FR, GB, IT, LI				
	JP 59148786	A2	19840825	JP 1984-20917	19840209
	JP 04047670	B4	19920804		
	US 4739053	A	19880419	US 1986-837880	19860306
PRAI	DE 1983-3304330	A	19830209		
	US 1984-577771	A1	19840207		
GI					



AB 2H-v-Triazolyl[4,5-d]pyrimidines (I; R = halogen, alkyl, or Ph; R1, R2 = alkyl, chloroalkyl, monoalkyl, alkylphenyl, alkoxyphenyl, phenylalkyl, or together R1R2 form a 5- or 6-membered heterocycle; R3 = H, halogen, CN, SCN, alkoxy, alkoxyalkoxy, phenoxy phenalkoxy, alkylthio, phenylthio, S(CH2)mCO2R4 where R4 = alkyl and m = 1-4, alkylcarbonyl, benzoyl, carboxy, alkylsulfonyl, phenylsulfonyl, cycloalkylamino, heterocyclyl, or NR1R2 where R1, R2 = the same as above; n = 0-2) are described for use as charge carrier-transport agents in composite electrophotog. photoreceptors. Thus, an Al-coated PET film was coated with a composition containing chlorinated perylene 3,4:9,10-tetracarboxylic acid diimide bis(benzimidazole) (38% chlorinated) 50 and an acrylic acid-maleic acid diester vinyl chloride copolymer 50 parts at a thickness of 0.55 μ m to give a charge carrier-forming layer and then with a composition containing a com.

polycarbonate (melting 220-230°) 55 and II 40 parts at a thickness of 12 μ m to give a charge carrier-transport layer. The resultant photoreceptor showed high photocond. and low dark decay.

IC C07D487-04

CC 74-3 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 28

ST triazolylpyrimidine deriv charge generator electrophotog; pyrimidine triazolyl deriv electrophotog photoreceptor; composite electrophotog photoreceptor charge generation

IT **Photography**, electro-, plates
(composite, with charge carrier-generating layer containing triazolylpyrimidine derivative)

IT Polycarbonates

RL: USES (Uses)

(electrophotog. composite photoreceptor with charge carrier-generating layer containing triazolylpyrimidine derivative and)

IT 75-01-4D, polymers with acrylic acid and maleic acid diesters 79-10-7D, polymers with maleic acid diesters and vinyl chloride 94010-58-9D, chlorinated

RL: USES (Uses)

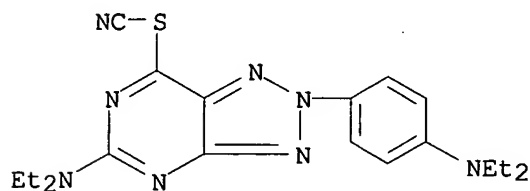
(electrophotog composite photoreceptor with triazolylpyrimidine derivative-containing charge carrier-generating layer and charge carrier-transporting layer containing)

IT 94010-08-9 94010-09-0 94010-10-3 94010-11-4 94033-84-8

RL: USES (Uses)

(electrophotog. composite photoreceptor with charge carrier-generating

layer containing)
 IT 548-62-9 8004-87-3 31095-85-9D, esters, polymers with acrylic acid and vinyl chloride 58517-47-8
 RL: USES (Uses)
 (electrophotog. composite photoreceptor with charge carrier-generating layer containing triazolylpyrimidine derivative and)
 IT 94010-51-2P 94010-53-4P 94010-55-6P 94010-57-8P
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and chlorination of)
 IT 94010-12-5P 94010-13-6P 94010-14-7P 94010-15-8P 94010-16-9P
 94010-17-0P 94010-18-1P 94010-19-2P 94010-20-5P 94010-21-6P
 94010-22-7P 94010-23-8P 94010-24-9P **94010-25-0P**
 94010-26-1P 94010-27-2P 94010-28-3P 94010-29-4P 94010-30-7P
 94010-31-8P 94010-32-9P 94010-33-0P 94010-34-1P 94010-35-2P
 94010-36-3P 94010-37-4P 94010-38-5P 94010-39-6P 94010-40-9P
 94010-41-0P 94010-42-1P 94010-43-2P 94010-44-3P 94010-45-4P
 94010-46-5P 94010-47-6P 94010-48-7P 94010-49-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and electrophotog. applications of)
 IT 94010-52-3P 94010-54-5P 94010-56-7P 94033-85-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and ring closure of)
 IT 16713-15-8
 RL: USES (Uses)
 (reaction of diazotized, with (diethylamino)aminopyrimidone)
 IT 2350-01-8
 RL: USES (Uses)
 (reaction of diazotized, with (dimethylamino)aminopyrimidone)
 IT 94010-50-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with diazotized diethylphenylenediamine hydrochloride)
 IT **94010-25-0P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and electrophotog. applications of)
 RN 94010-25-0 HCAPLUS
 CN Thiocyanic acid, 5-(diethylamino)-2-[4-(diethylamino)phenyl]-2H-1,2,3-triazolo[4,5-d]pyrimidin-7-yl ester (9CI) (CA INDEX NAME)



L47 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1984:42996 HCAPLUS
 DN 100:42996
 TI **Silver** halide **photographic** materials
 PA Konishiroku Photo Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 18 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57176032	A2	19821029	JP 1981-60622	19810423
	JP 02052251	B4	19901113		
PRAI	JP 1981-60622		19810423		

GI For diagram(s), see printed CA Issue.

AB **Ag** halide **photog.** materials are described which contain ≥ 1 **cyanine** dye of the formula I (A, B = heterocyclic ring; R, R1 = C1-5 alkyl, aryl, carboxyalkyl, or sulfoalkyl; X = anion; m = 0, 1, 2; n = 0, 1) in which a H on the methine groups may be substituted, ≥ 1 compound selected from R2SO2SR3 and R2SO2S(CH2)pSSO2R3 (R2 = C1-18 alkyl, C6-18 aryl, heterocyclyl; R3 = metal, organic cation, C6-18 aryl, heterocyclyl; p = 2-10), and ≥ 1 antioxidant. These materials exhibit good sensitivity and good latent image stability. Thus, II, 4-hydroxy-6-methyl-1,3,3a,7-tetrazaindene, a magenta coupler [1-(2,4,6-trichlorophenyl)-3-[3-(2,4-di-tert-amylphenoxyacetamido)benzamido]-5-pyrazolone] dispersion, and an antioxidant (4-tert-butyl-1,2-dihydroxybenzene) were added to a **Ag** (Br,I) **emulsion** which was phys. ripened in the presence of p-MeC6H4SO2SNa, and then coated on a film support to give a film which showed excellent sensitivity and latent image stability.

IC G03C001-28; G03C001-34

CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST **cyanine** dye sensitizer **photog.**; stabilizer

IT **photog** latent image; antioxidant **photog**

IT **Photographic** sensitizers
(**cyanine** dyes as)

IT Antioxidants
(phenol derivs. as, for **photog.** stabilizer compns.)

IT **Photographic** stabilizers
(**thiosulfonates** as)

IT 98-29-3 149-91-7, uses and miscellaneous 33898-78-1 72684-97-0
RL: USES (Uses)
(antioxidant, **photog.** stabilizer composition containing)

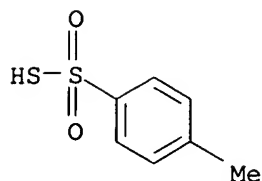
IT 18360-25-3 20904-74-9 23216-67-3 29419-49-6 33628-03-4
51588-61-5 60507-44-0 85238-31-9
RL: TEM (Technical or engineered material use); USES (Uses)
(**photog.** spectral sensitizer)

IT 1887-29-2 2943-42-2 3753-27-3
RL: USES (Uses)
(**photog.** stabilizer composition containing antioxidant and)

IT 3753-27-3
RL: USES (Uses)
(**photog.** stabilizer composition containing antioxidant and)

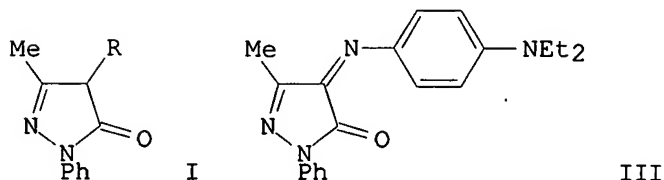
RN 3753-27-3 HCAPLUS

CN Benzenesulfonothioic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)



● Na

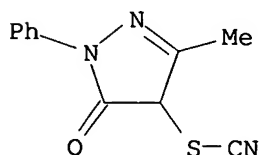
L47 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1979:492975 HCAPLUS
 DN 91:92975
 TI Oxidative coupling of active hydrogen compounds with p-phenylene diamines.
 III. Reactivity of 4-substituted 3-methyl-1-phenylpyrazolin-5-ones with
 N,N-diethylquinonediimine
 AU Wilde, H.; Mann, G.; Burkhardt, U.; Weber, G.; Labus, D.; Schindler, W.
 CS Sekt. Chem., Karl-Marx-Univ., Leipzig, DDR-701, Ger. Dem. Rep.
 SO Journal fuer Praktische Chemie (Leipzig) (1979), 321(3), 495-502
 CODEN: JPCEAO; ISSN: 0021-8383
 DT Journal
 LA German
 OS CASREACT 91:92975
 GI



AB I containing a variety of substituents (R) in the 4-position were prepared and
 treated with N,N-diethyl-1,4-quinonediimine (II) [29812-35-9] at pH 8 or
 9 to give azomethine dye (III) [4595-01-1], the yield of which depended
 on the nature of R. As in the case of the reaction of 4-substituted
 1-hydroxy-3,5-bis(methoxycarbonyl)-2-naphthanilide with II (reported
 earlier), the reactivity of I was considerably slower than the oxidative
 coupling of I (R = H) which also gives III, indicating that the formation
 of III is determined primarily by the electronic substituent effect.
 CC 40-12 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 Section cross-reference(s): 22
 ST pyrazolone reaction quinone diimine; azomethine formation pyrazolone
 quinone diimine; substituent effect azomethine formation; color coupler
 variation **photog**; oxidative coupling pyrazolone
 IT Dyes
 (azomethine, formation of, from diethylquinonediimine and
 pyrazolinones, substituent and pH effect on)
 IT **Photographic** developers
 (diethylphenylenediamine, oxidative coupling reaction of, with

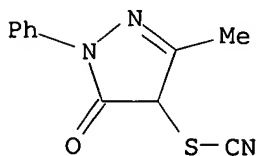
pyrazolinones)
 IT Substitution reaction
 (of diethylquinonediimine with pyrazolinones)
 IT Coupling reaction
 (of pyrazolinones with diethylquinonediimine, substituent and pH effect on)
 IT Acidity
 Ionization in liquids
 (of pyrazolinones, coupling reaction with diethylquinonediimine in relation to)
 IT Substituent effect
 (on coupling reaction of pyrazolinones with diethylquinonediimine)
 IT **Photographic** couplers
 (pyrazolinones, coupling reaction of model compds. for, with diethylquinonediimine)
 IT 88-74-4
 RL: USES (Uses)
 (coupling of diazotized, with methylphenylpyrazolinone)
 IT 1781-33-5 2721-84-8 4173-74-4 4408-13-3 4408-14-4 5142-72-3
 5393-61-3 7207-36-5 17900-68-4 21638-87-9 40864-30-0 41927-23-5
 55868-74-1 **56634-79-8** 56634-85-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (coupling reaction of, with diethylquinonediimine)
 IT 7673-55-4 16258-08-5 40251-88-5 56634-80-1 56634-82-3 56634-83-4
 56634-84-5 71197-04-1 71197-05-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (coupling reaction of, with diethylquinonediimine, pH in relation to)
 IT 29812-35-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (coupling reaction of, with pyrazolinones, substituent and pH effect on)
 IT 93-05-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidative coupling of, with pyrazolinones, substituent and pH effect on)
 IT 89-25-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidative coupling reaction of, with diethylphenylenediamine)
 IT 24221-18-9P 71197-02-9P 71197-03-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and coupling reaction with diethylquinonediimine)
 IT 27918-31-6P 33405-92-4P 71196-90-2P 71196-91-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reaction with methylphenylpyrazolinone)
 IT 61550-69-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reductive cyclization of)
 IT 4595-01-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT 76-02-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with aminopyrazolinone derivative)
 IT 2492-26-4 15052-19-4 15091-70-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with bromopyrazolinone derivative)
 IT 583-39-1 771-62-0 7271-44-5

RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with chlorine)
 IT 528-76-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with methylphenylpyrazolinone)
 IT 4408-12-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with trichloroacetyl chloride)
 IT 56634-79-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (coupling reaction of, with diethylquinonediimine)
 RN 56634-79-8 HCAPLUS
 CN Thiocyanic acid, 4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl ester
 (9CI) (CA INDEX NAME)



L47 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1975:549078 HCAPLUS
 DN 83:149078
 TI Oxidative coupling of 4-substituted 5-pyrazolones
 AU Wilde, Horst; Mann, Gerhard; Lehmann, Joachim; Labus, Dieter; Schindler,
 Wolfgang; Sydow, Udo
 CS Sekt. Chem., Karl-Marx-Univ., Leipzig, Ger. Dem. Rep.
 SO Zeitschrift fuer Chemie (1975), 15(6), 217-18
 CODEN: ZECEAL; ISSN: 0044-2402
 DT Journal
 LA German
 GI For diagram(s), see printed CA Issue.
 AB The effects of substituents R in the 4 position of 1-phenyl-3-methyl-5-
 pyrazolones (I, R = H, Br, SCN, NO, N:NPh, Me, Ac, substituted PhS,
 heterocyclic thio) on the yields of azomethine dye (II) [4595-01-1] prepared
 by oxidative coupling of I with p-H2NC6H4NEt2 [93-05-0], were studied.
 Yields were 100% H or Br, 0% when R = Me or Ac, and .apprx.5-25% for the
 other R.
 CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
 ST oxidative coupling substituent effect; pyrazoline azomethine
 photog dye
 IT Dyes
 ([[(diethylamino)phenyl]imino]methylphenylpyrazolone, by oxidative
 coupling, substituent effect on)
 IT Substituent effect
 (on oxidative coupling of methylphenylpyrazolone derivs. with
 (diethylamino)aniline)
 IT Coupling reaction
 (oxidative, of methylphenylpyrazolone derivs. with
 (diethylamino)aniline, leaving group effect on)
 IT 4173-74-4 17900-68-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (attempted oxidative coupling of, with (diethylamino)aniline)
 IT 89-25-8 4314-14-1 7673-55-4 16258-08-5 40251-88-5 41927-23-5

56634-79-8 56634-80-1 56634-81-2 56634-82-3 56634-83-4
 56634-84-5 56634-85-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidative coupling of, with (diethylamino)aniline)
 IT 93-05-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidative coupling of, with methylphenylpyrazolone derivs.)
 IT 4595-01-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT 56634-79-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidative coupling of, with (diethylamino)aniline)
 RN 56634-79-8 HCAPLUS
 CN Thiocyanic acid, 4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl ester
 (9CI) (CA INDEX NAME)



L47 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1973:153688 HCAPLUS

DN 78:153688

TI **Photographic** yellow coupler

IN Van Poucke, Raphael Karel; Benoy, Gaston Jacob; De Cat, Arthur Henri

PA Agfa-Gevaert A.-G.

SO Ger. Offen., 31 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

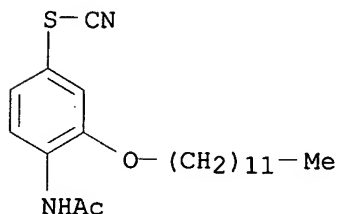
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2114578	A	19721005	DE 1971-2114578	19710325
	BE 780164	A2	19720904	BE 1972-3844	19720303
	IT 960497	A	19731120	IT 1972-86222	19720304
	US 3843366	A	19741022	US 1972-232185	19720306
	FR 2130156	A5	19721103	FR 1972-8576	19720310
	FR 2130156	B1	19761029		
	GB 1379813	A	19750108	GB 1972-11340	19720310
PRAI	DE 1971-2114578	A	19710325		

GI For diagram(s), see printed CA Issue.

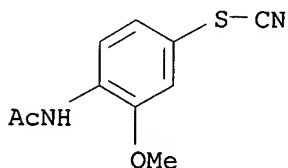
AB o-Alkoxybenzoylacetanilide [I; R, R1 = C1-20 alkyl; R2 = H or a cleavable substituent which gives the property of a 2 equivalent coupler; R3 = CO2R4 (R4 = alkyl, alkoxyalkyl), CONR5R6 (R5, R6 = H, R4), SO2R4, SO2NR5R6]
photog. couplers are described which are diffusion stable, have a high coupling activity, and react to form yellow azomethine dyes with a high gradation, high Dmax., and good absorption in the blue spectral region. Thus, a Ag(Br,I)-gelatin emulsion (2.3 mole % I) containing 0.006 mole I (R = C16H33; R1 = Me; R2 = H; R3 = CO2Me)/kg emulsion and the usual stabilizing, coating, and hardening agents was coated 150 g/m2 on a support, dried, and overcoated with a protective layer of gelatin. The

material was then exposed through a step wedge and processed to give a relative sensitivity of 100, a gradation of 1.04, a Dmax. of 1.93, and 100% absorption in the blue spectral region vs. 32, 0.78, 1.34, and 100%, resp., for a II-containing control.

IC C07C; G03C
 CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** Processes)
 ST alkoxybenzoylacetanilide yellow **photog** coupler; acetanilide alkoxybenzoyl **photog** coupler
 IT **Photographic** couplers
 ((alkoxybenzoyl)acetanilide derivs. as yellow)
 IT 41572-16-1 41587-17-1 41608-51-9 41608-52-0 41608-53-1
 41608-54-2 41608-55-3 41608-56-4 41608-57-5 41608-58-6
 41608-59-7 41608-60-0
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**photog.** yellow coupler)
 IT 5081-37-8P 41587-18-2P 41608-61-1P 41608-62-2P 41608-64-4P
 41608-65-5P 41608-66-6P 41608-67-7P **41608-68-8P**
 41608-69-9P 41608-70-2P **41608-71-3P** 41608-72-4P
 41608-73-5P 41608-74-6P 41608-75-7P 41608-76-8P 41608-77-9P
 41608-78-0P 41608-79-1P 41609-00-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT **41608-68-8P 41608-71-3P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 41608-68-8 HCAPLUS
 CN Thiocyanic acid, 4-(acetylamino)-3-(dodecyloxy)phenyl ester (9CI) (CA INDEX NAME)



RN 41608-71-3 HCAPLUS
 CN Thiocyanic acid, 4-(acetylamino)-3-methoxyphenyl ester (9CI) (CA INDEX NAME)

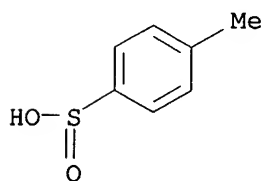


L47 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1971:493004 HCAPLUS
 DN 75:93004
 TI Stabilization processing of **silver** halide **emulsions**

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

IN Ohkubo, Kinji; Masuda, Takao; Yamasue, Koutarou; Hayashi, Katsumi
 PA Fuji Photo Film Co., Ltd.
 SO Ger. Offen., 19 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2052698	A	19710513	DE 1970-2052698	19701027
	JP 49033787	B4	19740910	JP 1969-85819	19691027
	FR 2066514	A5	19710806	FR 1970-38499	19701026
	GB 1308938	A	19730307	GB 1970-51039	19701027
PRAI	JP 1969-85819	A	19691027		
AB	Discoloration of images or of image background obtained with neg. or prefogged direct pos. emulsions after processing in a developer and a thiocyanate stabilizer bath is minimized by an aromatic sulfinic acid (PhSO ₂ Na) which may be added as such or as salt to the emulsion (not containing a developing agent) or to an adjacent layer (0.01-60 g/m ²), or to the developer, stabilizer solution, or used as sep. bath (1-250 g/l.). The acid is assumed to suppress aerial oxidation				
IC	G03C				
CC	74 (Radiation Chemistry, Photochemistry, and Photographic Processes)				
ST	sulfinic acid photog stabilizer; direct pos film stabilizer; image discoloration stabilizer				
IT	Photography (processing, stabilizer bath containing alkali metal aromatic sulfinates for)				
IT	824-79-3	873-55-2	26652-46-0		
	RL: USES (Uses) (photographic stabilizer bath containing)				
IT	824-79-3				
	RL: USES (Uses) (photographic stabilizer bath containing)				
RN	824-79-3 HCAPLUS				
CN	Benzenesulfinic acid, 4-methyl-, sodium salt (9CI) (CA INDEX NAME)				



● Na

L47` ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1966:439069 HCAPLUS
 DN 65:39069
 OREF 65:7330e-h,7331a
 TI **Photographic** color couplers
 IN Loria, Anthony; Salminen, Ilmari F.

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

PA Eastman Kodak Co.
 SO 6 pp.
 DT Patent
 LA Unavailable
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3253924		19660531	US	19650208
AB	Novel 2-equivalent color couplers of the general formula RSCN, where R represents a common coupler radical were prepared. These couplers require the development of only 2 exposed Ag halide mols. during the color development to form 1 mol. of dye from a mol. of coupler and a mol. of developer; a further advantage of the novel couplers is offered by the release of thiocyanate ions in the color development aiding in the dissolving of Ag halide. NH ₄ SCN (I) (7.6 g.) in 150 cc. 95% AcOH treated at 15-18° with 4 cc. Br in 50 cc. AcOH, stirred 15 min., diluted with 2 vols. H ₂ O, and the precipitated oil dissolved in 125 cc. Et ₂ O, treated with 14.3 g. BzCH ₂ CONHPh, stirred 3 hrs. at room temperature, and kept overnight				

gave

pale yellow BzCH(SCN)CONHPh (II), m. 148-50° (MeOH). BzCH₂CO₂Et (840 g.), 41 g. AcONa, and 2100 cc. xylene refluxed with the removal of 100 cc. xylene, treated with stirring with 862 g. 5,1,3-H₂NC₆H₃(CO₂Me)₂, m. 178-80°, refluxed about 8 hrs. with over-head removal of EtOH, heated slowly to 130° with the removal of 50 cc. distillate, diluted with 1000 cc. xylene, and heated to boiling gave 838 g. cream-colored 3,5-(MeO₂C)C₆H₃NHCOCH₂Bz, m. 163-5°, which stirred at room temperature overnight with 3 equivs. alc. KOH and acidified gave 3,5-(HO₂C)C₆H₃NHCOCH₂Bz (III), m. 240-2° (dioxane). I (7.6 g.) in 250 cc. 95% AcOH treated 5 min. at 12-15° with 4 cc. Br in 50 cc. AcOH and then stirred 3 hrs. at room temperature with 16.4 g. III gave 3,5-(HO₂C)C₆H₃NHCOCH(SCN)Bz, m. 273-5° (decomposition) (MeOH). I (7.6 g.) and 9.46 g. 1-(2,4,6-trichlorophenyl)-3-pentadecyl-5-pyrazolone (IV) yielded similarly the 4-SCN derivative (V) of IV, m. 105-6° (MeOH). Similarly were prepared 1-(2,4,6-trichlorophenyl)-3-[3-(2,4-di-tert-amylphenoxyacetamido)benzamido]-4-thiocyano-5-pyrazolone (VI), m. 110°, and 1-(p-tert-butylphenoxyphenyl)-3-[α-(p-tert-butylphenoxy)propionamido]-4-thiocyano-5-pyrazolone (VII), m. 60°. I (7.6 g.) with 23.8 g. 1,2-HOC₁₀H₆CONH(CH₂)₄OC₆H₃(OC₅H₁₁-tert)₂-2,4 (VIII) yielded similarly the 4-SCN derivative (IX) of VIII, m. 112-14° (MeOH). A dispersion (25 cc.) of 1 g. V in 2 g. (o-MeC₆H₄O)₃PO and 2.2 g. gelatin mixed with 2.5 cc. medium-speed Ag halide emulsion, coated onto a support, dried, exposed under an image and developed with a solution containing 2.5 g. 2,5-H₂N(Et₂N)C₆H₃Me.HCl, 5 g. Na₂SO₃, 20 g. Na₂CO₃, and 2 g. KBr/l. H₂O gave a neg. Ag and magenta dye image with an absorption maximum at 538 mμ. The same **photographic** element developed after exposure with a solution containing 2 g. 4,3-H₂NMeC₆H₃N(CH₂CH₂SO₂Me)Et.H₂SO₄, 0.5 g. Na₂SO₃, and 30 g. Na₂CO₃/l. H₂O gave a magenta dye image with an absorption maximum at 536 mμ. VI, VII, and IX gave similarly dye images with absorption maximum at 538, 549 (magenta), and 700 mμ (cyan).

NCL 096100000

CC 46 (Dyes)

IT **Photographic** couplers or **Photographic** colorformers
 (3-anilino-1-phenyl-2-pyrazolin-5-one derivs. as)

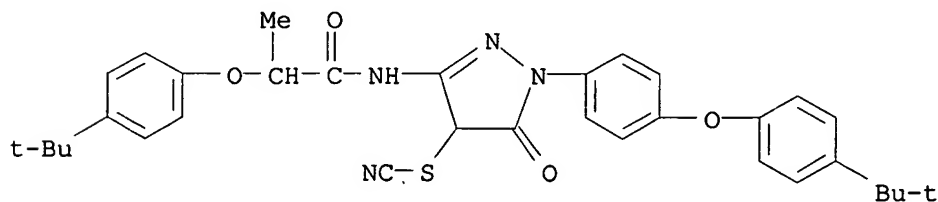
IT **Photographic** couplers or **Photographic** colorformers
 (thiocyanato group-containing)

IT Thiocyanic acid, 1-[p-(p-tert-butylphenoxy)phenyl]-3-[2-(p-tert-butylphenoxy)propionamido]-5-oxo-2-pyrazolin-4-yl ester
 Thiocyanic acid, 3-[[4-(2,4-di-tert-pentylphenoxy)butyl]carbamoyl]-4-hydroxy-1-naphyl ester

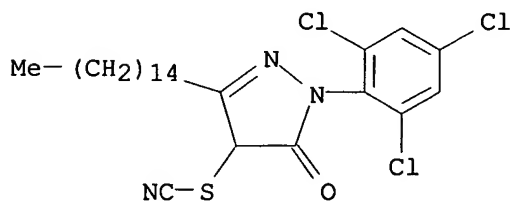
Thiocyanic acid, 3-[m-[2-(2,4-di-tert-pentylphenoxy)acetamido]benzamido]-5-oxo-1-(2,4,6-trichlorophenyl)-2-pyrazolin-4-yl ester

Thiocyanic acid, 5-oxo-3-pentadecyl-1-(2,4,6-trichlorophenyl)-2-pyrazolin-4-yl ester

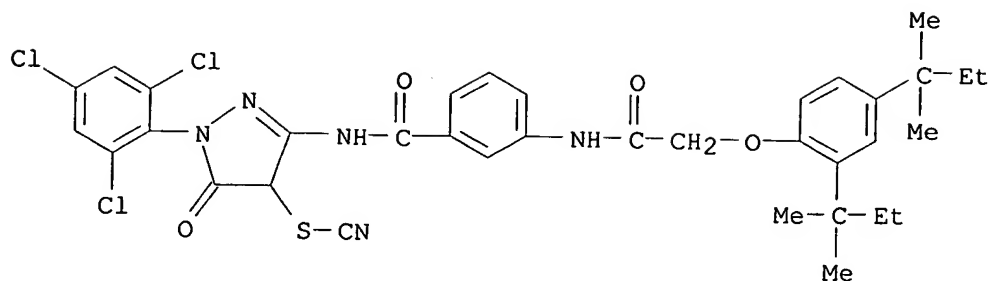
- IT 2279-35-8, Propionamide, 2-(p-tert-butylphenoxy)-N-[1-[p-(p-tert-butylphenoxy)phenyl]-5-oxo-4-thiocyanato-2-pyrazolin-3-yl]- 2279-36-9, Isophthalic acid, 5-(2-benzoyl-2-thiocyanatoacetamido)- 2279-37-0, Isophthalic acid, 5-(2-benzoylacetamido)- 2279-38-1, Isophthalic acid, 5-(2-benzoylacetamido)-, dimethyl ester 2279-40-5, Acetanilide, 2-benzoyl-2-thiocyanato- 2678-11-7, 2-Pyrazolin-5-one, 3-pentadecyl-4-thiocyanato-1-(2,4,6-trichlorophenyl)- 6670-03-7, Acetic acid, [1-chloro-N-(p-cyanophenyl)formimidoyl]-, ethyl ester 6670-04-8, Acetic acid, [1-chloro-N-(m-nitrophenyl)formimidoyl]-, ethyl ester 6670-05-9, Acetic acid, [1-chloro-N-(2,4-dichlorophenyl)formimidoyl]-, ethyl ester 6719-57-9, Acetanilide, 2-(2,4-di-tert-pentylphenoxy)-3'-[[5-oxo-4-thiocyanato-1-(2,4,6-trichlorophenyl)-2-pyrazolin-3-yl]carbamoyl]- (preparation of)
- IT 2279-35-8, Propionamide, 2-(p-tert-butylphenoxy)-N-[1-[p-(p-tert-butylphenoxy)phenyl]-5-oxo-4-thiocyanato-2-pyrazolin-3-yl]- 2678-11-7, 2-Pyrazolin-5-one, 3-pentadecyl-4-thiocyanato-1-(2,4,6-trichlorophenyl)- 6719-57-9, Acetanilide, 2-(2,4-di-tert-pentylphenoxy)-3'-[[5-oxo-4-thiocyanato-1-(2,4,6-trichlorophenyl)-2-pyrazolin-3-yl]carbamoyl]- (preparation of)
- RN 2279-35-8 HCAPLUS
- CN Thiocyanic acid, 1-[p-(p-tert-butylphenoxy)phenyl]-3-[2-(p-tert-butylphenoxy)propionamido]-5-oxo-2-pyrazolin-4-yl ester (7CI, 8CI) (CA INDEX NAME)



- RN 2678-11-7 HCAPLUS
- CN Thiocyanic acid, 5-oxo-3-pentadecyl-1-(2,4,6-trichlorophenyl)-2-pyrazolin-4-yl ester (7CI, 8CI) (CA INDEX NAME)



- RN 6719-57-9 HCAPLUS
- CN Thiocyanic acid, 3-[m-[2-(2,4-di-tert-pentylphenoxy)acetamido]benzamido]-5-oxo-1-(2,4,6-trichlorophenyl)-2-pyrazolin-4-yl ester (7CI, 8CI) (CA INDEX NAME)



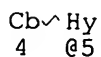
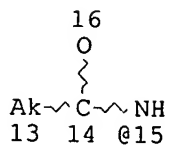
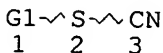
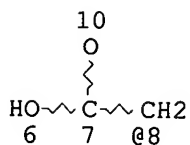
=> D QUE

L1

STR

G2~Cb

11 @12



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VAR G2=8/15

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GGCAT IS UNS AT 4

GGCAT IS UNS AT 5

GGCAT IS UNS AT 12

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1 N AT 5

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

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L20 477 SEA FILE=HCAPLUS ABB=ON L2

L22 12 SEA FILE=HCAPLUS ABB=ON L20 AND PHOTOG?/SC, SX, AB, BI

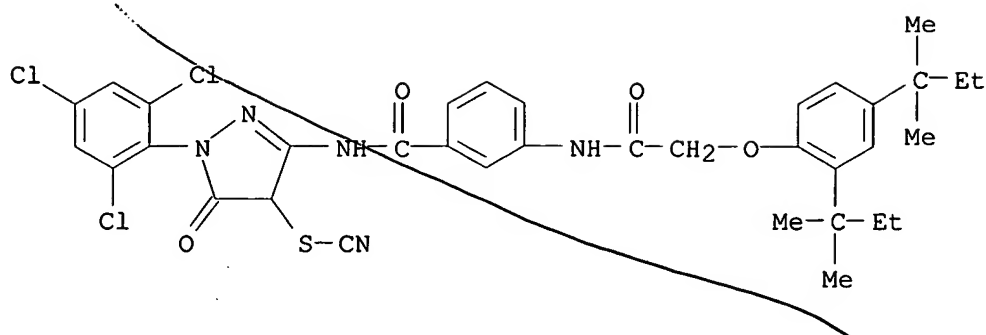
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L25 1 SEA FILE=REGISTRY ABB=ON L24 AND BENZENESULFINIC ACID AND 4(W) METHYL

L26 4 SEA FILE=REGISTRY ABB=ON C7H8O2S2.NA/MF

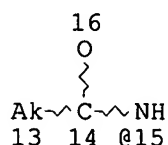
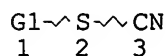
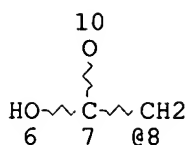
L29 1 SEA FILE=REGISTRY ABB=ON L26 AND BENZENESULFONOTHIOIC

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505



=> D QUE
L1

STR
G2~Cb
11 @12



Cb~Hy
4 @5

VAR G1=5/12
VAR G2=8/15
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS UNS AT 4
GGCAT IS UNS AT 5
GGCAT IS UNS AT 12
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1 N AT 5

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L2 942 SEA FILE=REGISTRY SSS FUL L1
L20 477 SEA FILE=HCAPLUS ABB=ON L2
L22 12 SEA FILE=HCAPLUS ABB=ON L20 AND PHOTOG?/SC, SX, AB, BI
L24 8 SEA FILE=REGISTRY ABB=ON C7H8O2S.NA/MF
L25 1 SEA FILE=REGISTRY ABB=ON L24 AND BENZENESULFINIC ACID AND
4(W) METHYL
L26 4 SEA FILE=REGISTRY ABB=ON C7H8O2S2.NA/MF
L29 1 SEA FILE=REGISTRY ABB=ON L26 AND BENZENESULFONOTHIOIC

L30 864 SEA FILE=HCAPLUS ABB=ON L25
 L31 60 SEA FILE=HCAPLUS ABB=ON L29
 L32 151 SEA FILE=HCAPLUS ABB=ON (L30 OR L31) AND PHOTOG?/SC,SX,AB,BI
 L33 84 SEA FILE=HCAPLUS ABB=ON L32 AND (AG OR SILVER OR AGCL OR AGX
 OR AGF OR AGBR OR AGI)
 L34 60 SEA FILE=HCAPLUS ABB=ON L33 AND EMULSI?
 L35 58 SEA FILE=HCAPLUS ABB=ON L34 AND PHOTOG?/SC
 L36 2 SEA FILE=HCAPLUS ABB=ON L20 AND (L30 OR L31)
 L37 14 SEA FILE=HCAPLUS ABB=ON L22 OR L36
 L38 2 SEA FILE=HCAPLUS ABB=ON L35 AND THIOCYAN?
 L39 0 SEA FILE=HCAPLUS ABB=ON L35 AND ?THIO?(2A)?CYAN?
 L40 0 SEA FILE=HCAPLUS ABB=ON L35 AND ?THIO?(2A)?NITRIL?
 L41 0 SEA FILE=HCAPLUS ABB=ON L35 AND ?THIO?(2A)NITRIL?
 L42 0 SEA FILE=HCAPLUS ABB=ON L35 AND ?THIONITRIL?
 L43 16 SEA FILE=HCAPLUS ABB=ON (L37 OR L38 OR L39 OR L40 OR L41 OR
 L42)
 L44 0 SEA FILE=HCAPLUS ABB=ON L35 AND ?CYANATO?
 L45 37 SEA FILE=HCAPLUS ABB=ON L35 AND ?THIO?
 L46 9 SEA FILE=HCAPLUS ABB=ON L45 AND (?NITRIL? OR ?CYAN?)
 L47 23 SEA FILE=HCAPLUS ABB=ON L43 OR L44 OR L46

=> FILE REG

FILE 'REGISTRY' ENTERED AT 13:59:49 ON 11 MAR 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 9 MAR 2005 HIGHEST RN 844817-50-1

DICTIONARY FILE UPDATES: 9 MAR 2005 HIGHEST RN 844817-50-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> D L25;D L29

L25 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 824-79-3 REGISTRY

CN **Benzenesulfinic acid, 4-methyl-, sodium salt (9CI)** (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN p-Toluenesulfinic acid, sodium salt (6CI, 8CI)

OTHER NAMES:

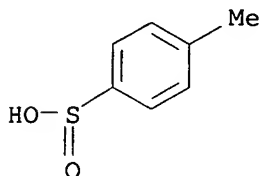
CN **4-Methylbenzenesulfinic acid sodium salt**

CN NSC 4871

CN NSC 9077

CN **Sodium 4-methylbenzenesulfinate**

CN Sodium 4-toluenesulfinate
 CN Sodium p-methylbenzenesulfinate
 CN Sodium p-toluenesulfinate
 CN Sodium p-toluenesulfinite
 CN Sodium p-tolylsulfinate
 DR 709654-41-1, 163077-66-5, 53271-66-2, 134311-31-2, 137788-67-1,
 143650-49-1
 MF C7 H8 O2 S . Na
 CI COM
 LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT,
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, GMELIN*, IFICDB, IFIPAT,
 IFIUDB, MSDS-OHS, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)
 DT.CA Caplus document type: Conference; Journal; Patent
 RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);
 PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or
 reagent); USES (Uses); NORL (No role in record)
 RLD.P Roles for non-specific derivatives from patents: USES (Uses)
 RL.NP Roles from non-patents: BIOL (Biological study); MSC (Miscellaneous);
 PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or
 reagent); USES (Uses); NORL (No role in record)
 CRN (536-57-2)



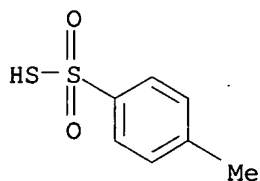
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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

861 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 864 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L29 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 3753-27-3 REGISTRY
 CN Benzenesulfonothioic acid, 4-methyl-, sodium salt (9CI) (CA
 INDEX NAME)
 OTHER CA INDEX NAMES:
 CN p-Toluenesulfonic acid, thio-, sodium salt (7CI, 8CI)
 OTHER NAMES:
 CN p-Toluenethiosulfonic acid sodium salt
 CN Sodium 4-methylbenzenethiosulfonate

CN Sodium p-toluenethiosulfonate
 DR 38563-79-0
 MF C7 H8 O2 S2 . Na
 LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX,
 CHEMLIST, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)
 DT.CA Caplus document type: Journal; Patent
 RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent);
 USES (Uses)
 RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent);
 USES (Uses); NORL (No role in record)
 CRN (45936-43-4)



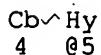
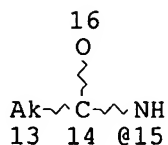
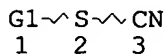
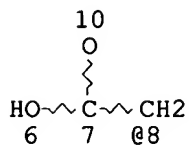
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60 REFERENCES IN FILE CA (1907 TO DATE)
 60 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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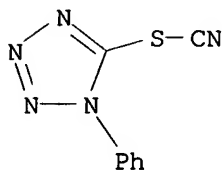
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 ECOUNT IS M1 N AT 5

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE
 L2 942 SEA FILE=REGISTRY SSS FUL L1
 L17 58 SEA FILE=REGISTRY ABB=ON C8H5N5S/MF
 L18 1 SEA FILE=REGISTRY ABB=ON L2 AND L17

=> D L18

L18 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 23905-19-3 REGISTRY
 CN Thiocyanic acid, 1-phenyl-1H-tetrazol-5-yl ester (6CI, 8CI) (CA INDEX
 NAME)
 FS 3D CONCORD
 MF C8 H5 N5 S
 LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, SPECINFO
 (*File contains numerically searchable property data)
 DT.CA CAplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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